The American Journal of CLINICAL MEDICINE

Vol. 19 NOVEMBER, 1912 No. 11

The Bulgarian Bacillus in Infantile Diarrhea

LAST month there appeared in these columns an abstract of a paper, by Dr. Clock, published in *The Journal of the American Medical Association*, telling of some really remarkable results in the use of a preparation of the bacillus lactis bulgaricus in the treatment of infantile diarrhea. Dr. Clock attributed lack of success with this remedy—and quite properly, we believe—to the employment of commercial cultures of these microorganisms which are not strongly viable. He might have gone a step further and stated that many of the preparations of so-called Bulgarian germs on the market do not contain this organism at all—for this is actually true. When the real Bulgar bacillus is properly employed, success is usually attained with it, and often in a surprising degree. This fact is not better shown than in the paper by Clock, just cited.

This view of the matter has again been brought to our attention by an editorial in the August number of *The Archives of Pediatrics*. The writer indicates more clearly than we have otherwise seen what a striking innovation the use of the lactic-acid germ introduces into the treatment of infantile diarrhea. "It takes considerable experience with this new therapy," he says, "for one to acquire the fortitude to continue to feed children who have green, slimy, loose stools, with blood and tenesmus, who show considerable emaciation and fever on their regular milk mixtures or their regular mixtures slightly diluted. Such a procedure is advocated, and by such a procedure some very marvelous results have undoubtedly been obtained. It is rather a shock, however, to see one who has believed thoroughly that the first thing to do in diarrhea is to stop the milk and give a cathartic, to change about entirely and, instead of his cathartics, give merely two white sugar-like tablets every two hours or so.

"Nor would even an enthusiast recommend such a procedure in all cases," continues this writer. "Some are too profoundly poisoned to permit of a waiting game and too shocked to be able to digest and assimilate even a diluted milk supply. But when one sees several cases in which such wicked stools gradually become yellower, less frequent, with less blood and mucus, and finally are normal and formed in the course of five or six days, with the child improving in general condition, the fever subsiding, and the weight remaining stationary or even increasing, his confidence grows and he is more willing to persist in the treatment through the first three or four anxious days."

The editor of *The Archives* further points out that, in spite of its revolutionary character, the lactic-acid-bacillus treatment is equal to the milk-withdrawal method in every particular, and decidedly excels it in one point at least: "When the Bulgar germ is used, the patient maintains his body-weight better, and he picks up more rapidly after the acute stage of the diarrhea is past."

While the lactic-acid organism has marked therapeutic merit in the treatment of the alimentary disturbances of children, its value

in the bowel ailments of older people must not be lost sight of—and particularly those of a chronic or semichronic character. Metchnikoff first advocated its use for intestinal autointoxication, and for intestinal infection with germs of the colon type. Experience has certainly demonstrated its value in all these conditions (it has recently been highly extolled for diabetes, in which alimentary disturbance plays such a prominent role), and its administration has been simplified by the knowledge that it may be given in "white, sugar-like tablets" when the very acid artificially soured milk is distasteful to the patient.

Why should we call ourselves men, unless it be to succeed in everything, everywhere? Say of nothing, "This is beneath me," nor feel that anything is beyond our powers. Nothing is impossible to the man who can will.—Mirabeau.

A SENSIBLE MOVE

For, lo! these many moons *The Illinois State Medical Journal* and the *Bulletins* of the State Board of Health have been filled with matter that has informed their readers that Editor K. doesn't like Dr. Egan, and that the latter denies the allegations and defies the allegator. All which doubtless is interesting to Editor K. and to Dr. E., but rather tiresome to the numerous supporters whose cash keeps these publications going, and who do not care a doit about their quarrel.

Thankfully we present our acknowledgement of the change. Dr. Egan has dropped the fight and devoted the last three of his *Bulletins* to matters of public interest, especially as bearing upon the high cost of living and some means of meeting the same. The February issue reprinted Wyman's paper describing the organization and scope of the Public Health Service and its reports upon epidemic cerebrospinal meningitis and antityphoid vaccination. The *Bulletin* for March republished the Department of Agriculture's papers upon "The Economical Use of Meat in the Home," and "Cheese and Its Economical Uses in the Diet." April followed with the same Department's bulletins on "Fish as Food," and "Remedies and Preventives for Mosquitoes."

Dr. Egan should receive assurances of public appreciation of the change; while Dr. K. may stand at ease when we assure him that all of us, including the whole population of Illinois, stand ready to admit that he doesn't like Dr. Egan and that we need no further assurance of that important fact.

The *Bulletin* on meat discusses the food-values of different cuts as compared with the market prices, methods of preparing for table, reduction in the expense, extension of flavor, meat pies and salads, meat with macaroni and with eggs, fireless cookery, casserole cookery, meat with vinegar, pounded and chopped meats, sauces, and many other topics. More than sixty recipes are given, some being well-known standards from the cook-books, but others entirely new. Thus in consulting economy one may also secure that *sine qua non* in dietaries, novelty with palatability.

The article on cheese discusses the varieties of this comestible found in the American markets, their manufacture, care, uses as food, comparison with other foods, digestibility, cost, and preparation.

Cheese has always been considered rather difficult of digestion and tending to cause constipation, but the exact experiments recently made show that this is not the case. Healthy young men were fed on a diet of fruit, bread and American cheese; the results showing that over 90 percent of the nitrogenous material was retained in the body, and nearly 90 percent of its energy became available. It was found that cheese was digested rather in the intestines than in the stomach. The energy required to digest cheese did not materially exceed that required for meat. Nor did cooked cheese differ from the raw; so that we may indulge in Welsh rabbit with a clear digestive conscience.

Cheese overheated may develop an acrid irritating substance. The only advantage of associating alkalis with it is the neutralizing of the fatty acids, which may be irritant. The bulletin gives 87 recipes for cheese dishes. Some of these look good. We may have our doubts as to cheese gingerbread, but how about corn and cheese soufflé, tomato rarebit, baked crackers and cheese, cheese omelet, Roman gnocchi, scalloped potatoes, cabbage or cauliflower with cheese, cheese jelly salad, cheese biscuit, and cheese custard!

The paper on fish treats similarly of various sea-foods, but gives no recipes. Experiment shows that fish are as nutritious as meats and that they last as long before hunger returns—thus demolishing two cherished bits of popular misinformation. An important table gives the comparative values of various fish and other foods. We learn here

that 10 cents invested in 60-cent oysters yields only 74 calories, and lobster, 77, while the dime produces 998 calories in salt mackerel, 437 in Boston's pride, salted, 1862 in stewing beef, 891 in 7-cent milk, 5363 in wheat flour, 2020 in 90-cent potatoes, 412 in bananas, 8055 in corn meal, and even 240 in strawberries.

We have given enough to show the great practical value of these bulletins to the housekeeper on whom falls the duty of amply feeding her family with palatable articles in the face of a steadily rising market. These bulletins can be secured, we presume, by applying to Dr. James A. Egan, Springfield, Ill., Secretary of the State Board of Health.

As well hope to be able to throw a pebble into the lake without causing a ripple, as to hope to be able to think even a single thought without causing an effect upon "life's surge so restless" of the great whole of humanity.—Anna August Gaskell.

THE DRUGGISTS' DUTY CONCERNING COALTAR DERIVATIVES

In *The Apothecary* for August, Mr. F. M. Siggins, a druggist in Meadeville, Pennsylvania, has an article on the harmful effects of the indiscriminate use of coaltar derivatives as they are observed by druggists, which should be taken to heart not only by druggists in general but also by physicians. Mr. Siggins registers his emphatic objection to the continued open-sale use of the coaltar derivatives.

He relates that twenty-five years ago a physician who gave large doses of acetanilid, and was enthusiastic over the results, eventually came to cut down his doses 65 percent, and on being asked the reason he replied that he had nearly killed half a dozen of his best friends and that it was time to stop.

Personally, as he relates, Mr. Siggins has at various times taken 2 1-2-grain doses of acetphenetidin with salol for colds and rheumatism and for years it did him no harm, apparently, but he is now compelled to acknowledge the contrary. After two or three days' use he would find himself almost completely benumbed and with a very weak heart action.

Mr. Siggins also cites a number of instances which came under his observation, in which the continued excessive use and often continued moderate use of coaltar derivatives caused manifest harm, and he insists that druggists should not put out any advertising that may contain a recommendation for such remedies. He hopes to see soon upon the statute-book of every state a law similar to that of Pennsylvania concerning cocaine, for he maintains that opium and cocaine are not half so deadly as coaltar derivatives, since the former, while openly showing what they can do, coaltar derivatives work silently until the end is near.

Mr. Siggins is to be commended for the honest stand he takes. But, unfortunately, it is not only the druggists who urge coaltar derivatives recklessly and with an utter disregard of the possibilities of harm, for many physicians are almost equally at fault. Preparations containing acetanilid and other coaltar derivatives are prescribed all too readily and frequently and, unfortunately, often by trade-names which the patients can read and make use of for a later independent purchase of the same remedy.

We cannot expect our patients to conceive the inadvisability of taking, without a physician's order, remedies that relieve pain. The very fact that such remedies have been prescribed once for that purpose is sufficient warrant, in the ordinary layman's opinion, for his securing such preparations independently over the counter. It would be well if physicians would take the trouble invariably to memorize the chemical names of coaltar derivatives and to prescribe them only by these names. It would be still better if any preparations containing such drugs would be exclusively dispensed by the physician and only in quantities sufficient for the case in hand.

ATROPINE FOR HEMORRHAGE

A man shot himself in the region of the heart and was brought to the hospital in Grand Rapids in an apparently hopeless state. Internal hemorrhage was continuing and the severed vessels were beyond the reach of the surgeon. The interne, Dr. Grimes, gave the man atropine to full effect and the bleeding stopped.

A diver ran his head against some solid body and was taken from the water bleeding profusely from the lungs. He was taken to a hospital on the South Side, where the interne administered atropine, and the hemorrhage ceased as the face began to be flushed. Two days later the man was anxious to resume his dangerous occupation—professional diving.

The principle on which atropine is administered for hemorrhage is simple and easily comprehensible: This alkaloid actively stimu-

lates the vasomotor dilators of the capillaries, increasing their caliber and capacity for blood and their attraction for it. Consequently the blood is largely impounded in the vast capillary system, the pressure in the veins and arteries is correspondingly decreased, and thus there is less blood to flow from the orifices in the lacerated vessels. This renders atropine the most powerful and certain of hemostatics. Since its effects, when given hypodermatically, are manifested within five minutes, atropine is also the quickest in getting to work.

To the art of surgery, the brilliant achievements of which have rendered the century of medicine illustrious, the alkaloidist tenders this resource for those times when the ligature may not meet the needs.

God made some living things without brains, but not a living thing without a stomach. Don't abuse it, and rightly use it.—Dr. J. D. McFaden.

LET THE MEDICINE BE PLEASANT

Some weeks ago Dr. Bernard Fantus, of Chicago, had an article in *The Journal of the American Medical Association* upon "Candy Medication." The doctor, who is professor of materia medica and therapeutics in the College of Physicians and Surgeons of this city, has discovered, through personal experience, that there is both pleasure and profit to the physician in giving medicine to the little ones that not only does not taste bad but which also actually tastes so good and is so pleasing to the palate that the children want more of it. This discovery earned him the pleasing sobriquet of "the candy doctor."

We wonder if by any accident a copy of CLINICAL MEDICINE of some five or six years ago, containing some clever cartoons by our old friend, Dr. Torgny Anderson, could have fallen into the hands of Professor Fantus. In these cartoons Dr. Anderson showed, first, a picture of a mother and medical attendant struggling with a rebellious youngster to force a nauseous spoonful of medicine down his unwilling throat. How the boy hated that doctor was shown as only the clever pen of the artist could depict it. Another cartoon showed another kind of doctor, one who had "reformed," dealing out pleasant-tasting, candy-like tablets, and small, sugar-coated and attractively colored granules in which the really bitter medicine was effectually disguised. The child did not dislike this doctor—it loved him.

We are glad that Dr. Fantus has learned this lesson, and we are also delighted that he is hammering the idea into the brains of other people who still senselessly and insanely continue to give bad-tasting and worse-smelling medicines to the helpless little ones, and for no other reason than because these medicines are "official."

For years manufacturers have been struggling with this problem, and it is easy enough to get the remedies of indifferent taste in delightfully tasting form without turning your back office or your pharmacist's dispensary into a sticky, fly-inviting confectioner's shop. There are now delightful aromatized calomel tablets that "babies cry for"; and acetanilid, phenacetin, phenolphthalein, soda and a lot of other things have long been made attractive to patients, big and little, without loss of efficiency. Of course no one can make strychnine sweet to the tongue or asafetida really a delight to the nostrils, and for the bad-tasting and worse-smelling things there is no form so nearly ideal as the granule, which crowds all that is worth while of the drug into a space so small that even a baby can swallow it without knowing that it is doing so.

While we approve heartily of all that Professor Fantus says, we should be pleased, indeed, if we could persuade him to add granule-medication to "candy-medication." He has the "makings" of a real active-principle enthusiast.

ANENT DIGITALIS-THERAPY

When Livingston talks of ergot, it is for us to listen, for he has devoted himself to the study of that drug; likewise when Henry Beates speaks of digitalis, for he has lived with the foxglove for many years. In *The Monthly Cyclopedia* for September, Dr. Beates gives his latest observations on digitalis-therapy. In this he leaves the well-worn lines of discussing the drug as a heart tonic and speaks of its value in nutritional disorders—the cellular metabolism. He recognizes the individuality of the cells, crediting them with the power of "emitting and sending messages to the proper sources calling for the supply of substances necessary for their integrity and life."

Modification of cellular function requires the entrance of a foreign substance. "The normality of the intercellular fluid depends upon the mean pressure existing between the arterial system on the one hand, and the venous on the other." "The restoration

of lost circulatory equilibrium is a principle of treatment applicable to a vast field of nutritional diseases."

But digitalis itself consists of living cells, subject to physicochemic, biochemic and physiologic laws. Variation in quality is unavoidable. There should be a standard, and one only. Standardization fails, because preparations do not "stay put" but deteriorate.

Dr. Beates has no hesitation in voicing the only logical conclusion—"the writer in finality prefers active principles of demonstrated therapeutic value." About these he adds: "An experience of many years permits of but one conclusion, viz., that, wherever perverted circulatory equilibrium obtains, a digitalin of known reliability, administered in doses of from 1-6 to 1-2 grain three or four times daily, will, other things being equal, secure the desired results."

Going further, he compares digitalin with a food. When other treatment fails, he wins success by adding digitalin to the previous treatment. In this way, ununited fractures, ulcers, edema, and effusions and albuminuria of passive hyperemia have been promptly overcome. Also, the affections due to incipient senile cerebral retrograde changes, insomnia, failing memory, difficulty of concentrating thought, and so on. He has seen the catheter-life of senile vesical paralysis overcome after months of digitalin-therapy, instituted for the purpose of reestablishing a normal intercellular fluid in the cord, as well as, perhaps, in the viscus itself. Cerebral myocardial and arterial degenerations are held in check by the use of this "food."

Dr. Beates is not the only one to recognize the value of digitalin in the hands of one who knows it and who has learned to look beyond the names of diseases and to recognize the aberrations from normal functionation.

Year by year the use of this powerful drug increases. We have long since passed the stage when, as Peter said, "the fear of digitalis is the beginning of wisdom in treating the heart." We have split the plant into its glucosides, each with its own powers and uses differing from all the others. We have learned to know the varying activities of each, as, when the crude drug is given, each comes into play in time and modifies the influence of the one preceding. We know the relaxant power of digitonin, quickly manifested, the rapid substitution of the heart-tonic power of digitalein which Beates utilizes, the slow but enduring tonicity and constriction of digitalin, and the long-delayed death-grip of digitoxin.

Thanks to chemistry, we have at our command these four delicate, precise, exquisitely differentiated and powerful weapons, each for appropriate application, usable alone or in a convenient combination which will elicit the full powers of the group.

The one undeciphered hieroglyph, the one blank on our map, the one unsolved problem is, why men will continue to use the old hopelessly inadequate crude preparations of digitalis!

Many loved Truth, and lavished life's best oil
  Amid the dust of books to find her,
Content at last, for guerdon of their toil,
  With the cast mantle she hath left behind her.
  Many in sad faith sought for her,
  Many with crossed hands sighed for her;
  But these, our brothers, fought for her,
  At life's dear peril wrought for her,
  So loved her that they died for her,
  Tasting the raptured fleetness
  Of her divine completeness:
  Their higher instinct knew
Those love her best who to themselves are true,
And what they dare to dream of, dare to do.
—James Russell Lowell.

SEE AMERICA FIRST

The Chicago Examiner recently published an appeal to Americans to see the wonders of their own country before hiking through Europe. There are reasons a-plenty. Not a corner, highway or byway, city, town, hamlet or farmstead of the old world but has been mauled over, written up, snapshotted and hackneyed; not a broken-nosed statue or a picture, even if only a blur of dirty paint on rotting canvas, but has been driveled over *ad nauseam*. European travel has become so common that it no longer lends distinction. Nobody who hears the familiar phrase, "When I was in Europe" so much as turns around unless it is to flee from the scene. There has been little to tell of Europe since N. P. Willis and Bayard Taylor gleaned the territory. Nothing really new has appeared since Strother, barring Twain. Dorsey has wisely devoted himself to a study of the people, the little he says of the scenery being incidental.

On the other hand, look at our own great America! Have you seen our eleven national parks, ranging from Wind Cave in South Dakota, with 10,522 acres, to Mesa Verde (42,376 acres); Mt. Rainier (207,300), Crater (159,300), Glacier (915,000). Yosemite (716,-622), to Yellowstone Park with 2,142,720 acres? Have you seen the Grand Canyon of

Arizona? The Big Trees, Yosemite Falls, the geysers, the glaciers, the gorges, the innumerable beauties and wonders that surpass any and all to be found in the rest of the world?

It seems worth while for everyone to enlarge his experiences, cultivate his esthetic sense, broaden his outlook, and realize the wonders with which the beneficent Creator has so prodigally endowed our native land, rather than go to gaze at a mass of crumbling masonry and listen to a hired guide's lying legends. Europe has capitalized herself for the tourist. Even her palaces are to be inspected at so much per. But after seeing our own Rockies, we may go look at the little Alps; and as we gaze at the Scandinavian fjords we may tell the natives of the greater wonders in our own lands. There is not to be seen in Europe a carnival to compare with the festivals arranged in New Orleans.

See America first!

The American doctors still throng the schools of Europe. Many of them imbibe little beyond floods of German beer and a snobbish contempt for their own country. Many go over simply for the *éclat* that is supposed to attach to the man who has studied abroad. Some others find in the methods and men of the Old World much that is really valuable, and some, we hope, also learn to look on the achievements of their own countrymen. But, taken all in all, we have more than a suspicion, in truth a deep impression, that nine out of ten of these medical votaries of Europe would learn very much more of the things that would make them better doctors right here in America.

Let us summarize the matter by saying that the doctor should go to Europe when he has learned all that America has to teach him. There is not in all the wide areas between Queenstown and the Urals a therapeutist whose teachings are so much superior to ours as to justify the expense of a steerage ticket. There are some specialists who are allowed preeminence because they are "foreign." There is not a department of medicine in which American instructors may not be found equal or even superior, in the training of English-speaking men, to the best abroad. Nine-tenths of the money spent on European "study" by medical men is wasted—or should be charged to advertising account.

See America first!

Begin by seeing Chicago. See our galaxy of surgeons—so many that I cannot name them all, and so excellent that I dare not omit them.

Note what splendid work our diagnosticians, our specialists, our instructors, our writers are doing. Visit our great hospital clinics, our colleges, our dispensaries, our laboratories. Visit the busy institution where was inaugurated the revival in drug-therapeutics which is now in evidence all over the world. While the movement for establishing therapeutics on a scientific basis originated in Europe, it is America which developed the idea, allied it with other departments of the healing art, and gave the movement the impetus that has carried it throughout the civilized world.

Truly, there is enough to be learned in Chicago to warrant the seeker after medical lore to begin right here.

When a man buys goods from you or from me he owes us money. The money is ours and we are entitled to it. He has no excuse for being disgruntled if we ask for it or even if we insist on having it.—Frank Farringford.

"HE NEVER ASKED A FEE"

The newspapers are eulogizing the memory of Dr. Joseph Dawson, who died in Wauconda, Illinois, about two years ago. At last a sum of money is being raised, by popular subscription, to provide a monument for the now unmarked grave of this physician; his foremost claim to immortality seemingly being, in the papers at least, that "he never asked a fee."

We learn that Dr. Dawson had a large practice, that such money as he received he gave freely to charity, keeping enough only for his actual necessities, that his past was a closed book to which he would never allude, and that he was the best-loved man in the scene of his activity.

It is evident that Dr. Dawson had fine qualities that naturally and properly endeared him to his patients; yet, is it not highly probable that one of his greatest attractions was that he gave them something for nothing? If a man should appear in your town—an average town without very rich or very poor—who would distribute groceries to all comers, we can readily imagine that he would be pretty popular; so, also, the individual who would hand out candy free to the children would be firmly intrenched in their affections. But would that be just to other people selling groceries or confectionery, who had clothing to buy, children to educate, and homes to pay for?

Free service is wrong-minded service. The servant is worthy of his hire. No honest effort, no matter however small, should be

unrequited. And, while love and gratitude are dear to our hearts, they alone can pay no bills—not even that of the gravestone maker.

The people should be disabused of the idea that the practice of medicine is a form of charity of which they are entitled to be the recipients. Men like Dr. Dawson, good-hearted men, are perpetuating that idea. So is every doctor who permits his bills against creditors to accumulate and remain unpaid.

Medicine invites us to a life of heart-breaking and unending toil, requiring more scientific knowledge of human nature and its foibles and follies than any other profession. In the eternal fitness of things, it should be better requited than most other occupations—instead of being one in which payment for services rendered may be "indefinitely postponed."

Thoughtfulness of others, tenderness to those in distress, consideration for those in financial difficulties, and charity to the poor are qualities which every true physician should cultivate; but a scheme of life which pauperizes ourselves and others is economically unsound and morally unjust. If your services are not worth a reasonable price, get out of the profession. If they are of value, demand commensurate remuneration, just as your grocer, your architect or your banker does.

Don't, I beg of you, cheapen yourself by cutting prices. Professional bargain-making is another form of charity and as disastrous to him who gives as to him who receives. With the other physicians of your community you should establish a fee-rate which is fair to you, fair to other doctors, and fair to those who have the bills to pay. Stick to that fee-rate and demand your money from those able to pay—and get it.

Also, when someone within your hearing eulogizes some kindly but slipshod doctor who has gone through life without collecting the thousands of dollars that he had earned, and as a result is going without books, journals, instruments, office-equipment and post-graduate courses which were absolutely necessary to make his work high-grade—also probably leaving debts to be liquidated and a widow to take in washing—put the thing to these people in its right light.

What other business man is proud of his business laxity?

THE SPECIFIC TREATMENT OF TYPHOID FEVER

In infectious diseases, the specific treatment refers to the treatment of the disease, either prophylactically or curatively, with a bacterin prepared from the related micro-organism or with a serum obtained from an animal that has been immunized by repeated injections of the same microorganism.

The value of the prophylactic treatment of typhoid fever by means of bacterins, which was first proposed by Sir Almroth Wright, was proved in our own country during the recent encampment of troops near the Mexican borders, and a number of interesting and conclusive reports have been published in medical literature, and especially in publications of the U. S. Army Medical Service and of the U. S. Public Health and Marine Hospital Service, which show that a successful infection by the bacillus Eberth can be counteracted by timely immunization.

It is different with the biologic treatment of the disease after it has already been established. Some months ago Dr. Luedke, of Wuerzburg, reported, in the *Muenchener Medizinische Wochenschrift*, the results of his investigations and experiments, both with animals and clinical, with different serums that he had prepared for the purpose. His conclusions were distinctly favorable to passive immunization in the treatment of typhoid fever, while he had not succeeded in obtaining satisfactory results from active immunization, that is, from the use of a bacterin.

It is, therefore, with considerable interest that we note the report by Dr. William Ream, in *The Western Medical Review* for August. This, briefly, is to the effect that in the little town of Walthill, Nebraska, a large number of people were exposed in the course of a few days to infection from the water of a well that was directly contaminated by a privy vault some fifteen feet distant. When the blow fell, it was like a "bolt from the blue." Whole families were stricken at once, and after the first few cases of fever Dr. Ream resolved to try, what he calls the serum treatment, but what really was a bacterin treatment. To quote his account:

"As soon as a person came to us who had used water from the infected well and showed any typhoid symptoms, a specimen of the blood was procured and examined by the Widal method. If the test proved negative, 250 million killed bacteria were injected, and the persons were instructed to return in ten days, at which time 500 million were given, then in ten days following one billion were administered.

"In the beginning of this epidemic I gave the typho-bacterin only as a prophylactic, and

only resorted to it as a therapeutic agent when the cases proved so very severe, all running a course of from five to ten weeks, with an exacerbation of symptoms and the temperature about the third week running up to 104° F., showing an extreme type of infection, and this in cases that had every care, in good homes, with excellent nurses.

"After I began the use of the typho-bacterin every other day in the 17 cases in which it was used, 14 were markedly benefited, the temperatures went to normal in from three to ten days, with no fatalities, and in 3 cases it had no effect either for better or worse.

"In this epidemic I had 37 cases, with one death. The serum was not used in the one fatal case, unfortunately, she being one of the first cases and her previous health very poor.

"The only medical treatment employed was strychnine sulphate as a heart stimulant, when needed. Phenyl salicylate, in capsules of 5 grains each every three hours, was given, with the hope of establishing intestinal asepsis, and where there was troublesome tympanites, which was rare, 5 drops each of the oil of eucalyptus, oil of turpentine and the essential oil of cinnamon were given in capsules every three hours, to control the same. Calomel was used in 1-4-grain doses every hour, until 1 grain was given, every two or three days, to control the bowels. No other cathartics were found necessary."

The bacterin treatment of typhoid fever is certainly interesting, and we welcome its further investigation. That this remedy will prevent the disease in the vast majority of cases has been indubitably demonstrated by the experience in the United States Army. In a paper read at the great Congress of Hygiene at Washington, Major Russell showed that in 82,000 soldiers who have been successfully vaccinated against typhoid fever the disease subsequently occurred in only four—a record that is simply marvelous. This method of prevention is certain to be adopted in civil life in communities exposed to epidemics of the disease from any cause, and the quicker physicians resort to it, the more quickly will they fall in line with the tendencies of the time.

The curative value of the bacterin treatment in actual *cases* of typhoid fever is quite another matter, and one which is at present *sub judice*. We already have remedies that are effective in the majority of cases. With the intelligent use of intestinal antiseptics like the phenolsulphonates, combined with other indicated remedies, the physician can do work of the highest order. It may be that he will do better work when to this bacteriotherapy can be added. But for this we can well afford to wait for further proof.

When a woman says to her husband, "Tom, I want to have a candid talk with you," he knows it is not her faults she wishes to discuss.—Ed. Howe.

HEALTH OF SUMMER HOMES

Dr. Evans, health commissioner of Chicago, attributes the autumn prevalence of typhoid fever in this city to infection brought from the summer resorts by returning citizens. Flying from the supposed perils of the city in the dog-days, people find more real dangers in the resorts. This state of affairs is to be attributed to the invincible belief of the average individual in the purifying influence of the soil upon sewage and garbage. Such matters are consigned to the care of Mother Earth with a sublime faith in her unbounded capacities, or rather as an exemplification of the maxim: "Out of sight, out of mind."

If any thought is given the fate of these materials at all, it is assumed that they are valuable to the soil as fertilizers. Never a suspicion arises that the soil is becoming polluted with the germs of infective diseases, that the well is draining these from the earth, and that the latter is providing a well-fitted breeding place whence they are sure to be drawn and to enter into the food of the family. If ever a man was inspired, it was he who said that the "waters of affliction usually come from the family well."

With true marital consideration, the man in the country locates the well near the stable, so that his wife may have less labor carrying water to the live-stock. No thought of surface drainage occurs to him. When typhoid fever or diphtheria attacks his family, he never looks upon it as his own fault, due to disregard of hygienic principles with which he was familiar, but rather as a personal grievance, an instance of hard luck; and if we get down to the actual belief in his heart, it will prove to be not far distant from that of his pagan ancestors, who looked upon such visitations as evidences of the intervention of unfriendly deities.

With all his boasted practicality, his "common sense," he never realizes how costly a thing is sickness and how wise an investment is hygienic precaution. A Lumsden cloaca is made of two barrels, a T-pipe, and a 20-inch galvanized cylinder—total cost, $3.15; plus the boards and labor any ordi-

nary country privy requires. For the want of this simple and cheap contrivance near every rural home, a large section of the country is devastated by the hookworm and many thousands of our citizens are laid low by typhoid and other fevers.

The mortality of the city of Niagara Falls from typhoid fever averages 138 per 100,000, while that of Cornwall-on-the-Hudson, the seat of the New York Military Academy, is zero. The Falls city gets the drainage of Buffalo in its drinking water; that of the Hudson town is pure.

Some years ago, while visiting a certain popular western summer resort, the writer found the place built on the repute of a number of fine springs. These bubbled out of a gravely plain, without the slightest protection from surface drainage. The toilets of the town, including a hotel with more than 5000 visitors, were conducted into pits which allowed free seepage into the gravel, whence to the springs the way was short and unobstructed. Analysis showed waters phenomenal for the quantity of organic impurities they contained.

Dr. Dixon, health commissioner of Pennsylvania, in a recent bulletin enumerates the requisites for healthy summer and suburban residences as follows:

Ease and cheapness of access from the city where the man must work.

Dry and well-drained location, of proper elevation; the soil should be such as allows a cellar; and absence of mosquito-breeding swamps.

Trees for shade and windbreaks, but not to intercept the sunlight and air.

Porches of proper shape and size, also for sleeping.

Ventilation.

Abundance of pure water, concerning which nothing is to be taken for granted, but every possible test made of the water and watershed. Storage tanks should be of unpainted gulf cypress or cedar, or of black iron, asphalted, and screened to exclude insects and animals.

The house and cellar must be rat- and mouse-proof; the cellar well lighted and ventilated; all free from damp.

Plumbing must be sanitary; trapped fixtures; and ample care taken to dispose of waste water.

Sewage must not be discharged into soil or water courses, but held in storage until properly disinfected.

Stables must be cared for as perfectly as the house.

All of which is very good, indeed; but with all his knowledge, this accomplished sanatarian of that great state can not add the cool lake breezes and the lake bathing we enjoy along the shores of Michigan. And when the domestic hygiene has been well cared for, one wants to know that the moral hygiene will be equally desirable. Nobody cares to plant his family among dance-halls and whisky-shops when he himself is away at the city earning the costs.

In this day of flat-dwelling, the summer vacation for the family is a necessity. The children must have room to stretch limbs and lungs without restriction. The wife must have her rest from clothes-fights and worries. The man must have a place where he may spend a quiet, sanative week-end with the family.

For all this, the ideal would be a home on the great lake, near enough to be cheaply accessible, safe, sanatory, select, with one's own sort of folk as neighbors; reasonable in cost and yet so located as to warrant a rise in value with the passing years; and the spirit of relaxation pervading the place, so that one need not consider questions of "proper" dress. Bathing, boating, fishing, berrying, the endless fixing that such a place allows and demands; and freedom from wild animals, snakes, tramps, and other undesirable features. And, still, ease of obtaining the daily supplies of the household, without increase in their cost; and the diversions of a town when one wants them.

Anything else?

"There are two things that will reform this world: these are work and love." Therefore, the more of both we get into our daily lives the better for the world and especially for ourselves.—W. C. Abbott.

TOXIC PRINCIPLES IN COMMON PLANTS

This writer for years has advocated the boiling of vegetables in two waters, that is to say, the pouring off the water in which the vegetables have been brought to a boil and changing it to fresh. While this idea was largely based upon an attempt to remove the strong taste which many vegetables otherwise retain, there was behind it an indistinct memory of some unverified bit of information to the effect that most vegetables contain some harmful substances that should be removed in order to make them suitable for food.

This idea has recently been substantiated by a series of biologic investigations conducted by W. Peyer, a pupil of the German naturalist

E. Stahl (reviewed in *The Literary Digest*, August 3), on the protective products of plants.

Concerning leguminous seeds, including beans, peas, and lentils, which form a large part of our daily diet, it is said that they contain a chemical substance, the exact nature of which has not been ascertained, but which is so poisonous as to prevent mice and rabbits from touching these legumes. This avoidance, the author observes, is not due to the hardness of their integument, since even when softened by soaking or boiling they are not eaten.

A significant circumstance, which housewives and the great canning factories would equally do well to take note of, is that, when the experimenter changed the cooking water several times, thus eliminating the toxic principle, the animals ate the seeds immediately. So, also, when the seeds were first ground to powder and extracted with alcohol or ether they were promptly eaten. A confirmatory experiment was then made. The alcoholic or etheric extract thus obtained was used to moisten the favorite food of the animals, clover for the rabbits and crumbs of zwieback for the mice, and they rigidly abstained from the food thus treated. Further tests, consisting in pouring pure alcohol and ether over their food, proved that the deterrent cause did not proceed from these liquids themselves.

Says Prof. Peyer: "The active principle concerned seems to be volatile, for, on distilling the seeds with water, the first 10 or 15 cubic centimeters obtained had a particularly repellent action [upon the animals]. Similar distillates from grain and sunflower-seeds did not prevent the feeding of the animals."

These investigations of Peyer are of considerable interest and go to verify the opinion which this writer had formed some time ago in the course of some special researches, the results of which are not yet ready for publication; namely, that the active principles of socalled medicinal plants have largely the function—or at least have the one important function, among others—of acting as means of defense on the part of the plant against its enemies, whether insects, or animals, or other kind.

It is an interesting study and one not very easy of solution; still, the practical application, on the surface appears to be evident, namely, that it is wiser to boil the ordinary vegetables in two waters before eating.

And yet, and yet—the writer hardly had read Prof. Peyer's paper when he picked up one by Forbes Ross, who makes the statement that cancer is due to a deficiency of potassium salts, "owing to the popular custom of pouring away the juices of cooked vegetables, which contain potash and other valuable natural salts." And this view is in exact accord with certain theories recently advanced by Packard in *The Boston Medical and Surgical Journal*. Then, also, there is the living testimony of the many healthy disciples of a raw-vegetable diet.

On the whole—we shall abstain from giving advice!

Pay fair prices for pure drugs and charge fair prices for your services. Let no one point to you and say: "He is a cheap doctor, he uses cheap drugs, you cannot trust him."—Physicians Drug News.

"SOME UNIMPORTANT DRUGS"

Under this heading the erstwhile limelighted Council on Pharmacy and Chemistry—of late grown quiescent—in a pamphlet recently brought to our attention, discusses a number of vegetable drugs which are little known to the regular medical profession. Most of these have been employed by Eclectics, Homeopathists, and the laity. Now, there are several standpoints from which such drugs could be viewed, as, for instance:

1. That there is a reason for the repute and use one finds among any part of the profession or the people, and it is up to the investigator to account for such repute.

2. That, so long as we, the arbiters, are not convinced of the value of these remedies, they can have none.

3. That if these plants are not treated of in the works of certain therapeutists whom we accept as standard authorities, the remedies have no official standing and are unworthy of consideration.

4. That without favor or prejudice we examine the evidence submitted and render a judicial verdict, giving fair, impartial weight to the testimony.

Which of these points is occupied by the Council in the pamphlet before us we leave its readers to decide. But nobody has the right to assume the judicial functions who does not occupy the judicial standpoint.

For myself, were I in the Council, I should assume this judicial attitude and let the advocates and the opponents of each drug, the optimists and the pessimists present their evidence and arguments and then render my decision impartially. But as I am not the

judge I prefer to adopt the first position mentioned and to begin with the assumption that for every popular belief there is an adequate cause. After deriding the silly ideas that toads and the organic tissues of sundry animals possess therapeutic powers, we have at last tried out these things and found the beliefs founded on fact.

Many, many times I am reminded that we mistake by basing our reasoning on the assumption of our own completed knowledge, instead of realizing that the entire mass of knowledge possessed by the human race is but partial and fragmentary, and may be fitly represented by the stray pebbles, shells, and weeds gathered on the shore of the limitless of ocean of truth, along which we wander and over which our limited vision peers, dimly, a little way.

Very many doctors, mainly irregulars, believe in the virtues of thuja as an application. The Council gives it mention, without expressing an opinion beyond the condemnation title of the pamphlet.

Apis has been used since Galen, but the regular knows it only as a remedy for rheumatism when applied by means of the hypodermic apparatus of the bee. The Council fails to mention the evidence against the remedy, which, it assumes, far outweighs that adduced in its favor. As to its reputed value in vesical atony and various genitourinary conditions, and so on, no information is vouchsafed save its use by irregulars.

Fucus acts only through its minute content of halogens—according to the Council. Caulophyllum, they assert, was dropped because it failed to sustain its reputation. Failed with whom? Cornus is unnecessary as a bitter or antimalarial, but the writers apparently are unaware of its special value, the same as of that of caulophyllum, and a host of other drugs. Solanum, we learn, is probably of little value "in epilepsy"! Thrush's work on this plant has escaped the notice of Council members.

More interesting is the chapter on cactus, to which four pages are devoted. Here the conflicting evidence is presented, and these conclusions are reached: "(1) It is uncertan what part of the plant contains the active principle, and its nature is unknown. (2) Part of the favorable evidence comes from proprietary sources. (3) The clinical evidence is unsupported by animal experimentation. No reliable preparation has been developed; the action is not that ordinarily attributed to it, since cactus does not increase the heart-force, and despite the clinical evidence the indications are too uncertain. (4) Further investigation should be made in the laboratories." This is as far as they could be expected to go after having positioned themselves incautiously against cactus.

And so on. However, I should be doing the Council and this pamphlet injustice were I to omit to speak of their work in opposing the numerous ready-made conglomerations of little-known plants that have been so energetically and successfully exploited. A dozen of these plants are each believed to influence in a general way the female reproductive organs, but just how or through what chemic principle nobody has as yet determined.

These drugs are often assembled, by enterprising exploiters, in a single preparation, and then this hodge-podge is urged as a remedy for every female ailment, from amenorrhea, dysmenorrhea and menorrhagia, constipation and diarrhea, anorexia and bulemia, to coma and insomnia. It is a disgrace to the profession that so many of us prescribe these crude and unscientific combinations, which nearly always emanate from nonmedical men.

If there is real value in helonias, aletris, caulophyllum, mitchellia, viburnum, dioscorea, passiflora, *et id omne genus*, let us have their true place established by study of their active principles, with the precision of modern methods. If they possess different principles, there are diversities in their powers that would render each better fitted for some cases than for others. If they have one common ingredient, like the arbutin-bearing group, let us know what it is the presence of which in any plant renders it useful for woman.

The Council members turn aside to take an unnecessary whack at condurango, and in their hurry to exhibit their readiness to condemn it they fall into a fit. Thus, they assert that condurango has no specific action and is valueless, and then in the next paragraph they quote Cushny as to the presence of glucosides inducing grave toxic symptoms. If these glucosidic principles exert an influence over the bodily functions, it seems reasonable that their activity might be usefully applied when it is specially needed, as in the case of other positions. The strong evidence favoring condurango is gotten rid of by the simple process of reducing it. Baptisia is condemned because five named pharmacologists fail to mention it and, as the sum of therapeutic possibilities is embraced in their works, of course nothing outside of them can have value.

Our conclusion is, that the Council has not fully grasped the possibilities within its reach, and that, while it has done some needed work, this would have been infinitely more valuable had it been more dispassionate and more broadly judicial in its published reports.

FACTS REQUIRED BY THE NEW POSTAL LAW

At the last session of Congress, an amendment was added to the Post Office Appropriation Bill, requiring the filing and publication of certain information concerning the ownership and editorship of periodicals admitted to the mails as second-class matter. This amendment reads, in part, as follows:

SEC. 467½. It shall be the duty of the editor, publisher, business manager, or owner of every newspaper, magazine, periodical or other publication to file with the Postmaster General and the postmaster at the office at which such publication is entered, not later than the first day of April and the first day of October of each year, on blanks furnished by the Post Office Department, a sworn statement setting forth the names and post-office addresses of the editor and managing editor, publisher, business managers, and owners, and in addition the stockholders, if the publication be owned by a corporation; and also the names of known bondholders, mortgagees and other security holders. . . . . A copy of such sworn statement shall be published in the second issue of such newspaper, magazine or other publication printed next after the filing of such statement.

In accord with the provisions of the law we have placed our sworn statement on file with the Postmaster General and with the postmaster at Chicago, and reprint it herewith:

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC.

of The American Journal of Clinical Medicine, published monthly at Chicago, Ill., required by the Act of August 24, 1912.

NOTE.—This statement is to be made in duplicate, both copies to be delivered by the publisher to the postmaster, who will send one copy to the Third Assistant Postmaster General (Division of Classification), Washington, D. C., and retain the other in the files of the post office.

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Owners: W. C. Abbott, 4605 N. Hermitage Ave., Chicago, Ill.; C. A. Abbott, 4605 N. Hermitage Ave., Chicago, Ill.; J. C. Ryer, 5801 Winthrop Ave., Chicago, Ill.

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A. S. BURDICK,
Editor.

Sworn to and subscribed before me this 4th day of October, 1912.

C. O. BROWN,
Notary Public.

INFANT MORTALITY AND PHYSICAL TRAINING OF POTENTIAL MOTHERS

Below follows a summary of a dissertation on the topic named in the title, from the pen of E. Blanche Sterling, M. D., Wellesley College, and published in *The Archives of Pediatrics* for August, 1910.

In a series of 112 pregnancies, occurring in 66 women who had much training in physical exercise and in whose student-life the study of hygiene had been especially emphasized, the following facts are noted. It must be remembered, however, that a series of 112 cases is not a large one, and, while the results of this study are very suggestive, we could not call them conclusive unless corroborated by further investigation:

"(1). The death-rate among children of these marriages is lower than that given for the registration area of the United States, which is about 14.5 percent. (2) Eliminating the socalled "unavoidable causes" connected with birth, the death-rate is markedly lower. (3) The percentage of premature births is scarcely more than one-quarter that noted by Ballantyne in maternity hospitals. (4) Abortions occur about one-fourth as frequently as in most series of cases. (5) The percentage of breast-fed children is not as great as that given by Holt for New York City, which is probably about the average for all large centers of population in this country.

"We must not forget that in the school which these young women attended subjects pertaining to health were of paramount importance. I do not think that hygiene will ever become vital to the young women of the land until the academic councils of the various schools make as ample provision for such a course as they do for mathematics or languages or literature. Students will not take seriously a subject which the governing boards neglect."

" 'If we would solve the great problem of infant mortality,' to quote from George Newman's "Infant Mortality," 'It would appear that we must first obtain a higher standard of physical motherhood'."

Leading Articles

Surgical Aspects of Gastric Ulcer*

By HENRY F. LEWIS, M. D., Chicago, Illinois
Professor of Gynecology and Obstetrics in Bennett Medical College

EDITORIAL NOTE.—This interesting article was read by Dr. Lewis at a meeting of the Surgical Club of Bennett Medical College. Gastric ulcer and duodenal ulcer are now attracting much interest in the profession, and should be carefully studied in all their phases.

THE etiology of gastric ulcer, aside from those cases due to caustics, syphilis, cancer or tuberculosis, is somewhat dubious. It is well known that hyperacidity favors digestion of the wall of the stomach and that the socalled peptic ulcer usually occurs in connection with that condition.

Some of the Factors Involved

The determining cause of the ulceration in any particular spot of the gastric mucous membrane may be a thrombus of an arteriole, and perhaps occasionally an embolus. Local traumatism from a hard or sharp particle ingested with the food, the violence due to retching and vomiting from any cause may also be determining and locating causes.

It is generally stated that gastric ulcer, especially of the round peptic variety, occurs twice as often in females as in males. Of late, however, a number of observers are disposed to doubt this statement and even to believe that the preponderance of frequency may be in the males. It is certain, moreover, that far more men than women suffer from perforation of a gastric ulcer.

Ulcer of the stomach occurs more frequently during the ages between twenty and forty than at other periods of life.

The location of the ulcer is on the posterior wall of the stomach near the pyloric end and near the lesser curvature in about four-fifths of the cases reported. On the other hand, perforation of the ulcer is far more likely to take place when it is situated on the anterior wall near the pyloric end. The reason for the latter fact probably is that this portion of the stomach has much more mobility than the posterior wall because of the movements of respiration which cause the anterior wall of the abdomen to move constantly up and down and the anterior wall of the stomach to be moved with each breath by the descending liver and the diaphragm. Adhesions which tend to protect the ulcer from breaking into the abdominal cavity are more likely to form behind than in front of the stomach because of the nearly immovable condition of the posterior wall.

The true peptic ulcer is round or elliptical, with clear-cut edges. The base and margin are infiltrated with leukocytes and therefore the older chronic ulcer shows much induration of the margins and bottom. It is the peptic ulcer which is more prone to perforation than the other varieties.

Diagnostication of Ulcer of the Stomach

The diagnosis of gastric ulcer, inasmuch as it depends largely upon subjective symptoms, such as pain and tenderness, is not always easy.

When an ulcer is present the ingested food irritates the ulcerated spot and causes spasm of the pylorus. This is preeminently true in most instances, because as a rule the ulcer is located near the pyloric end of the stomach. The spasm of the pylorus causes prolonged retention of the contents within the stomach, with consequent decomposition and distention with gases. The very spasm of the pylorus pulls upon the ulcer and intensifies the pain. A gastroenterostomy, by virtue of which the food is carried into the intestine by a shortcut, often prevents these distressing symptoms and even may be a valuable aid in perfecting

*Abstract of a paper read before the Surgical Club of Bennett Medical College, December 15, 1911.

the healing of the ulcer by allowing rest to the stomach.

Hemorrhage occurs at some time or other in about half of the cases. In acute ulcer the bleeding often is very great, sometimes fatal within a short time. In chronic ulcer the hemorrhages may be frequent but scanty in amount, and many times are accompanied by vomiting. In the chronic cases it is only when a vessel of considerable size is ulcerated through that dangerous hemorrhage ensues. The bleeding may not be evidenced in the vomitus, but may be shown by the presence of occult blood in the stools.

Pain as a Symptom

Unless pain is a prominent symptom, it is often impossible to make a diagnosis of ulcer of the stomach. Many cases of perforation are reported where there was no history of severe gastric pain until the occurrence of the perforation itself. Pain and the susceptibility to pain are such personal matters that a history of pain, or its absence, is not always a valuable diagnostic point.

The pain of ulcer of the stomach is usually felt in the middle line of the abdomen between the xiphoid and the umbilicus, often limited to a small area. The pain is frequently intense, especially after taking food. The pain after eating comes on within a few minutes when the ulcer is at the cardiac end, and somewhat later when near the pyloric end. It is likely to be more severe the nearer the ulcer is to the pylorus.

Ulcer of the duodenum usually causes pain some hours after eating and is not so constant a symptom as in ulcer of the stomach.

Tenderness is less frequent than pain. Ordinarily it is confined to a small area in the center of the epigastrium. It is elicited more generally when the ulcer is on the anterior surface than on the posterior. The tenderness of gall-bladder disease is more toward the right of the epigastrium and is more marked.

Differential Diagnosis. Gastric Acidity. Oligocythemia

Hyperacidity, especially hyperchlorhydria, is almost always observed. However, this sign is not of great value, because it is present in many other conditions. The value of analysis of stomach-contents in cases of gastric ulcer is not so great as might be expected. There is no pathognomonic flora; there are no pathognomonic crystals. The existence of hyperchlorhydria is suspicious only. In general, while we expect a diminution or absence of hydrochloric acid in cases of cancer and an excess in cases of ulcer from other causes, yet the exceptions are so many that the importance of these signs is minimized.

Anemia is a frequent sign. It is due to the loss of blood and also to the diminished ingestion of food. The extreme pain after eating often compels the patient to limit his diet to starvation quantities. Anemia and so called cachexia are not good points of differential diagnosis between simple ulcer and cancer, for the reason that both may be present to a considerable degree in either.

Tumor. Perforation. Gastric Ulcer

A tumor commonly signifies cancer, although ulceration about the pylorus of benign character may be accompanied by so much induration of the tissue around that valve, even by enlargement of the neighboring lymphatic glands, that cancer occasionally is incorrectly diagnosticated.

The diagnosis of perforation of gastric ulcer presents some sharp points of differentiation. As a rule there is a history of previous digestive disturbances, although rarely a history of a previous diagnosis of ulcer.

The first symptom of gastric ulcer generally is sudden excruciating pain in the epigastrium, with great local tenderness. There is rigidity of the abdominal muscles, especially of the left rectus. Collapse of greater or less degree soon follows; the pulse becomes high, the expression anxious, the breathing rapid and shallow. Collapse, by itself, however, is not of great diagnostic value, because its occurrence is so variable, as well as being caused by so many other conditions. Vomiting occurs in about half of the cases, but the vomit is seldom bloody. Next come signs of advancing peritonitis, tenderness extending throughout the abdomen, especially at the right groin, distention of the peritoneal cavity with fluid and gases, dulness on the flanks; later, obliteration of the liver dulness. This last is a late sign and should not be waited for in forming the diagnosis or in determining the necessity for operation.

Appendicitis. Gallstones. Pancreatitis. Leukocytosis

Perforation of a gastric or of a duodenal ulcer may be mistaken for appendicitis. The operative procedures often begin with incision for that disorder, and the operator is led to the proper diagnosis because of the paucity of the pathological finding in and about the appendix. As the gastric contents pass down over the ascending colon and the

omentum, they soon reach the region of the cecum and appendix and then cause pain and tenderness in the right iliac region similar to that found in ordinary appendicitis. Sometimes, indeed, these later symptoms obscure the situation in the upper part of the abdomen.

Gallstones mostly have a longer history of pain and tenderness in the right hypochondrium and rarely cause such acute and overwhelming symptoms as does perforation of an ulcer of the stomach. They are also more likely to be accompanied by vomiting.

Acute pancreatitis is ushered in by a sudden severe, even agonizing pain in the epigastrium, but usually rather more to the left side than in the center. The tenderness frequently is acute, but is more toward the left. The distention of the abdomen is not so great nor so rapid; there is rarely much fluid in the peritoneal cavity. The previous history of gallstones or of gall-bladder disease also is valuable in diagnosis.

Leukocytosis is of little diagnostic value, because it is not manifested early enough. It is rather a measure of the patient's resistance.

Prognosis and Treatment

Approximately twenty-five percent of ulcers of the stomach eventually prove fatal. Death may ensue from hemorrhage, from perforation, from tuberculosis or from wasting disease superinduced by the anemia accompanying the ulcer. The mortality of cases of perforation is in the neighborhood of fifty percent under operative treatment, and nearly one hundred percent without operation. The prognosis depends chiefly upon the earliness of the operation. Mikulicz states that the prognosis is four times as good in those patients who are operated upon within the first twelve hours after the onset of the attack as in those who are operated upon later.

No other treatment than operation should be considered after the diagnosis has been made or even after it has been strongly suspected. Under proper precautions and with proper conditions the mere opening of the abdomen for exploration is far less dangerous than waiting in any case where the attendant suspects such a serious condition as perforation of a part of the alimentary tract into the peritoneal cavity.

The Operative Procedure

The incision should be made in the median line above the umbilicus or slightly to the right, so as to go through the rectus muscle. Hernia is better safeguarded by the latter procedure, but there is liable to be hemorrhage from muscular branches, which may delay and complicate the operation.

As soon as the belly is opened, the cloudy fluid filled with flakes of fibrin and of stomach-contents pours out of the incision, and this must be partly mopped up before one can successfully search for the perforation. One is led to the hole in the stomach by the bubbling of gases through the fluid and finds it usually as a small round aperture less than a third of an inch in diameter and surrounded by the indurated base of the ulcer.

In my experience, it is best to excise the ulcer before closing the perforation. The first suture of catgut passes through serous and muscular coats, and over this is placed a Lembert stitch of silk or, better, of celluloid linen. Drainage is always necessary. Sometimes, especially when the seat of the wound in the stomach is low down within the belly, a gauze or cigarette drain should be passed to the stomach wound.

In all cases a small wound should be made just above the symphysis pubis and a cigarette drain be inserted therein down to the bottom of the pelvis. An easy way to make this latter incision is to pass a long dressing forceps from the upper wound along the anterior abdominal wall to a point about an inch above the pubes and to cut down upon this from the outside.

The patient should be placed in bed in Fowler's position and kept in that position most of the time for several days. A continuous enema of normal salt solution should be given for one or two days, depending upon the reaction of the patient. In the absence of proper apparatus for Fowler's position, one may use a kitchen-chair, inverted and padded with pillows and blankets to support the patient's back. Pass a folded sheet around the back of the flexed thighs of the patient, just beyond the buttocks, and tie the sheet by each end to the head of the bed. Support the knees by pillows or cushions.

Bacterial Criminals and Medical Sleuths

From the Records of My Private Laboratory

By B. G. R. WILLIAMS, M. D., Paris, Illinois

EDITORIAL NOTE.—This is the ninth paper in Dr. Williams's very interesting series on "Surprises, Delights, and Curiosities Encountered in Medical Laboratory Work."

SO great was the faith of Simon Kemper in the power of prayer, it is claimed, that, when the price of seed-corn was high, he planted pumpkin-seed instead.

"And down upon his marrow-bones,
Night and morn,
Prayed most earnestly
For a field of corn.".

So great is the faith of certain physicians in their ability to diagnosticate disease without the aids which modern medicine has put into their hands that we are reminded of old Simon and the "pumpkin-head."

It is manifestly a waste of time to treat a disease that owes its origin to one kind of germ with the serum or vaccine obtained from another. Indeed, many of those questionable results of serum and bacterin therapy may be laid at the door of guessing. We may treat influenza, malaria, whooping-cough or many other infections with quinine usually with success, and no bad results; but after we have administered Neisser-bacterin to a patient with streptococcus infection or antipneumonic serums to a patient with typhoid fever which has been initiated by pulmonary symptoms, we are usually willing to stop right at this point (explaining the trouble as a phenomenon of anaphylaxis) and say that medicine is not what it used to be. In commenting upon the affair, we usually arrive eventually at one of two conclusions; viz., that there is nothing in bacterin therapy or that it is now time to stop bluffing.

It may be of interest to many readers to know just what varieties of germs may be found in infections of certain portions of the body, and, as I do not recall having seen such a classification, I have prepared a table based, so far as possible, upon my experience. The germs are listed after the location in their relative order of frequency:

Table of Bacteriological Findings in the Several Infections

Oral, Pharyngeal, and Tonsillary Exudates.—The staphylococcus which forms white colonies and a capsulated streptococcus (?) seem to be chiefly criminal. In ulcers, the treponema pallidum is more frequently found. Now and then the fusiform bacillus, actinomyces clubs and yellow staphylococci may be found. In certain ulcers of the tongue, I have found the tubercle bacillus. Other streptococci appear to cause mischief now and then. In the diphtheritic inflammations, blame may be pretty equally divided between certain streptococci and the bacillus of diphtheria. Occasionally in the milder troubles, the leptothrices and oidii may be found.

Aural "Exudates."—Although practically any germ may be the criminal in middle-ear infections, I have noted that the majority are caused by the various staphylococci, the streptococcus pyogenes and the pneumococcus appearing in frequency in about this order. Early in the disease, these germs appear in pure cultures, but later almost any possibility in mixed infection may be noted.

Conjunctival Exudates.—I am inclined to believe that, of all germs, the pneumococcus or some germ very closely related is most to blame for severe cases of pinkeye. I realize that this is not the accepted opinion in regard to the cause of acute conjunctivitis; and, while I may have dealt with epidemics of this infection, the pneumococcus is often cultivated from these eyes. Capsules are not always present. In certain epidemics, the Koch-Weeks bacillus has been identified. In these, the contagiousness is marked. When speaking of these criminals, I must not omit the gonococcus. I have seen this germ cause a rapid destruction of the eye in adults. Certainly the man with trachoma has good reason to fear the gonococcus secondary infection, according to my conclusions from one case. The texts usually give much space to the possibility of colon-bacillus infection, as well as the probability of the diphtheria bacillus causing trouble. I have had no experience with these infections. Certain harmless bacilli often resembling the diphtheria bacillus very closely appear to be normal residents in this location, and the conjunctival secretion is rarely sterile.

Pulmonary Exudates.—Considerable attention was given to this matter in my paper headed "What Some Patients Have Coughed Up." (See May, p. 504.) Certain limitations must be kept in mind when examining sputums. It is not wise to assume that every germ present comes from the lungs. (See this article.)

Gastric Contents.—This subject has also been considered in a previous communication. (See June, p. 611.) Recall that the microorganisms present here do not deserve the name of true criminals, but rather are the ghouls which arrive later and whose very existence at this location can be explained only by a weakness on the part of the gastric mucosa. Finding that they are not destroyed, they become brave, feasting on the sick person's food and causing fermentation and other changes which would scarcely classify them as true pathogenic germs.

Urine.—In this fluid are to be found the gonococcus, tubercle bacillus, colon bacillus, and bacillus proteus vulgaris. In certain forms of cystitis, especially catheter-infection, multitudinous varieties of germs may be present.

Vaginal Exudates.—It is well to remember that many vaginal discharges, though vile, contain no true pus-cells, but millions of desquamated pavement epithelial cells. In such a secretion, it is likely that pus-germs live with difficulty. Often a long nonmotile rod is found, which is known actively to destroy many pathogenic germs, especially the streptococcus of puerperal infections. When true pus, i. e., degenerating polymorphonuclear leukocytes may be identified, it is a fairly safe assumption that the gonococcus is not far distant. It is only fair to add, however, that occasionally some other germ, especially the pus-cocci, may give rise to vaginal pus.

Gall-Bladder Exudates.—Chiefly the typhoid and colon bacilli are present, although numerous others have been found.

Vertebral Caries.—Tubercle and typhoid bacilli are the offenders.

Cutaneous Abscesses.—Here we find the yellow staphylococcus, streptococcus, white staphyloccus, bacillus pyocyaneous (where pus is green), the first-named being the usual culprit. In at least one case, I found actinomyces clubs.

Ulcers on the External Genitals.—The criminal germs are the treponema pallidum, Ducrey's bacillus, yellow staphylococcus.

Certain Abscesses Between Diaphragm and Knee.—The colon bacillus.

Pleural and Pericardial Exudates.—Here the tubercle bacillus, now and then the pneumococcus, streptococcus, typhoid bacillus, or even the gonococcus may be the criminals.

Cerebrospinal Exudates.—Any of the pathogenic cocci, notably the meningococcus, the tubercle bacillus, and occasionally the typhoid bacillus are the pathogenic germs.

Dermatoses.—See preceding articles in this series.

Blood.—In bacteremias: Typhoid bacillus, plasmodium malariæ, streptococcus, tubercle bacillus (?), treponema (?), etc.

The identification of most of these germs may be done by smear preparations. With certain of them, special staining and cultural and inoculation methods must be carried out. After trying all the various methods of capsule staining, I am inclined to recommend that the search for the pneumococcus be made in an unstained hanging-drop preparation, with the diaphragm of the microscope slightly contracted.

The More Recent Tubercle Methods

Several years ago we dreaded the search for the tubercle bacillus, especially when dealing with suspected cold-abscesses, adenopathies, urine of pyelitis, etc. It was even claimed that tubercle bacilli could not be found in these lesions. But now we have less trouble; and medical progress is constantly bringing forward valuable procedures to assist us in this work. The other acid-proof bacilli are ruled out with ease by staining methods.

Our inoculation tests have been simplified; and, in this laboratory, as in many others, the thigh of the guinea-pig rather than the peritoneal cavity is selected for this inoculation. We have also learned that catheterized samples of urine are not always necessary when examining this particular excretion. Instead, we carefully clean and sterilize the portions about the external meatus, reject the first portion of the urine, and, as it continues to flow, catch the remainder in a sterile vessel. All of which shows a general tendency to simplify these operations.

Once we were certain that many weeks were necessary for the cultivation of the tubercle bacillus upon artificial media, but now we know that this germ will grow luxuriantly and rapidly upon so simple a diet as a common hen's egg. This is a true curiosity, but the actual technic cannot well be included in a paper of this scope. If any reader is especially interested in the hen's-egg method, I shall gladly give him the technic

which I employ, providing he enclose a stamp for reply.

In this connection, I might mention that among those who wrote to me for a description of the ink-method was a physician located upon an island and who rarely ever visits the mainland. If a man thus situated can be interested in improving his methods of diagnosis, we who are more fortunate may well profit by his example.

Criminals of the "Red-Light District"

An article on this subject would scarcely be complete without a special consideration of the naughty gonococcus. Here is a true story.

A young man, having "dried up" his clap, decided to marry a young lady very prominent in society. His physician advised him to let us take a look at his urine. A microscopic examination showed the presence of pus-cells and gonococci. The wedding was delayed and treatment was resumed. After a time the aspirant decided that he probably was fitted for the young lady's hand. Again the physician advised him to have his urine examined. He did. He searched out a medical friend who did not possess a condemning lens. The sample was held against the light by the physician, who did not perceive any clap threads floating in it, and thereupon, and upon this convincing evidence, made a positive statement. Quoth he:

"You are all right, Jimmy, old boy. Go ahead with the wedding."

"But what about a microscopical examination, doctor—do you consider it necessary?"

"Not at all, old man. This microscopic business is for the young fellow without experience. It's different with *me: I* can give you a final opinion just by looking at the urine.

Sad to tell: following the excesses of the honeymoon, the young husband, who was more decent than so many men, with horror discovered the reappearance of the morning-drop, and his grief was indescribable. The microscope showed the presence of hundreds of pus-cells and thousands of biscuit-bugs. All of which turns our attention back to the old story of the pumpkinhead.

The Ray-Fungus

At this point, I desire to relate a story which may serve as a warning—an instance where laboratory work was initiated after the harm was done.

A man died, presumably of pulmonary tuberculosis, although no sputum examinations had been considered necessary. At the necropsy, the prosector announced that the tubercles appeared rather soft and with a tendency to "run," and, after a microscopical examination, hastened to inform us that the ray-fungus appeared to be the criminal. It was. For, during its residence in this individual, it had become exalted, as we learned later to our sorrow.

Several cases of local infection occurred among those physicians who attended the postmortem examination. Finally one of these men developed a double ischiorectal abscess that was not relieved by incision and draining. After the club-like bodies were found, the cavities were curetted and iodides administered. In this instance, recovery was rapid. The writer of this article likewise carries a scar in his temporal region as a reminder of this germ and its possibilities as a criminal. Parenthetically, he is a hearty indorser of the sputum-analysis in all cases of suspected tuberculosis.

I have seen other instances of actinomycosis in humans, and am rather inclined to believe that this germ is very easily exalted or attenuated. In cattle, it gives rise to tumor-like growths, but in man, the process is rather that of a scar formation. When permitted to grow unmolested in the human subject, it undoubtedly becomes very virulent.

The Contagious Sore Throats

When medical sleuths set to work to hunt down the chief bacterial criminals, among the first to be caught in their nets was the cruel diphtheria bacillus. The detection of this notorious murderer once accomplished, the therapeutist, medicine's prosecuting attorney, showed him no mercy.

It seems to me that the microscopical examination should never be omitted in sore throats; else we must work in the dark.

Doctor, to how many people have you given antitoxin where the Klebs-Loeffler bacillus was not the criminal? Besides the enormous incident expense involved, you subject these persons to unjust quarantines and many other inconveniences. People remember these things, and are gradually "becoming wise." Some day (not many years hence) you will be placed in a bad light by their criticisms. "Never believed I had diphtheria, anyway. But, then, this old fogy Smith waited upon me—and he knows nothing of germs." Still, honor bright, you will deserve this censure, will you not?

Here is a pretty gamble—the red or the black? The membrane is easily detached

from the throat and leaves no bleeding surface. Therefore you choose the black. But it turns out to be diphtheria, and several persons die. Here is, indeed, a pretty gamble! Brother, would you gamble on the state of your own throat? Would you gamble on the condition of the throats of any of those you loved best?

Many of us have believed that the streptococcus or some other germs may cause severe anginas which are, not only endemic at certain times, but are actually "catching" in the true sense of the word. Certainly all contagious sore throats are not caused by the Klebs-Loeffler bacillus.

You may have been reading much concerning the Chicago epidemic of sore throats last winter, and of the claims and counterclaims as to a certain capsulated streptococcus as the probable criminal in the case. The main truth, however, has long been known by the country doctor. When asked concerning this point, the latter should make reply: "Even though this is not diphtheria, it is in all probability very contagious." However, when he begins the treatment, it is best that he know exactly what kind of criminal he is dealing with; the nature of the treatment, in fact, demands this. Do not unnecessarily inconvenience a man ailing with a streptococcus sore throat, but also do not turn over your patient to the bacillus that gives no quarter.

The typhoid-colon group of germs will be considered in my next communication. Besides these, I am also omitting several other interesting individuals to whom the Bertillon system has been applied and who have been given important positions in my bacteriological rogues' gallery.

A certain physician once attended a case of suspected typhoid fever for some two weeks without making a single laboratory examination or calling expert assistance in this field. Death appearing imminent, he was discharged and a progressive man called in his place. All of the typhoid tests proved to be negative. A blood-smear then was made; the patient, however, died two hours later. An examination of the red corpuscles upon this glass revealed the presence of large numbers of delicate endogenous rings. Now, this patient had received practically every drug recommended for enteric fever, but certainly not a single dose of quinine. When I think of this case, there comes to my mind the story of old Simon:

Oh, the pumpkinhead!
(That's what the neighbors said.)
Oh, the pumpkinhead
(Yes he did)
Planted it, and tended it
Night and morn,
Prayed most earnestly
For a field of corn.

My next paper will be on "Drinking-Water and Water Drinking."

"I HAVE been very fortunate in worldly matters; many men have worked much harder and yet not succeeded half so well; but I never could have done what I have done, without the habits of punctuality, order, and diligence, without the determination to concentrate myself to one object at a time, no matter how quickly its successor should come upon its heels. Heaven knows I write this in no spirit of self-laudation. My meaning simply is that whatever I have tried to do in life I have tried with all my heart to do well; that whatever I have devoted myself to I have devoted myself to completely; that in great aims and in small I have always been thoroughly in earnest."

—David Copperfield.

The Smoker's Tongue

By HENEAGE GIBBES, M. D., L. R. C. P. (Lond.), McAlester, Oklahoma

EDITORIAL NOTE.—This paper is, we believe, the last one the late Dr. Gibbes ever wrote. It is a practical discussion of a subject concerning which most physicians know little.

DURING an investigation I am making into the hookworm-disease and its connection with the surra parasite which I so often found in the sewer-rats in London before I came to this country, I tried various methods by which I could relieve the gastro-intestinal trouble that is so prevalent among a certain class of patients and difficult of removal, mainly because of their habits.

Naturally, intestinal antisepsis was one of the first problems I had to take into consideration. I cannot say, however, that I approached the question with an open mind, for, like many others, I thought antisepsis of the intestines, taken as its name would imply, was simply an impossibility—and so it would be if the term were taken in its full literal sense. But there are many things to be considered.

However, that is not the question I want to consider here. Anyone who has lived among men who smoke tobacco regularly, and probably is a smoker himself, will be familiar with the smoker's tongue. It is such a common thing to be asked, "What tobacco do you smoke?" "Does it bite your tongue?" —and every smoker knows well what "tobacco biting the tongue" means.

Now, what is this condition and what produces it? That it is laid to the tobacco is evident from the large number of different brands and the frequent statements made, not as to the excellence of the tobacco, but that it will not "bite the tongue." This is a question I have studied for years, as I am an inveterate smoker myself and have tried every brand of tobacco, almost, but without success—that is, without finding one that I could continue smoking for months without getting the smoker's tongue.

Constipation, Not Tobacco, at the Basis

In the earlier part of my career, I was a sailor and was seven years in China during that period. I cannot recall ever smoking anything but Manila cigars, neither can I recall ever having suffered from smoker's tongue. Neither, when in 1876 (being then in the profession), I accompanied a dipsomaniac out to Australia and back, can I recall any symptoms of the smoker's tongue. I then, in my mind, went over the different voyages I had made and failed to recall any such case among the officers or men.

This fact made me think that there must be something in the life of the sea. It could not be the food, as anything less likely to produce a condition of autotoxemia than the sea-diet I did not know of—a pound and a quarter of salt beef one day and a pound and a half of salt pork the next, and so on. And this was not ordinary salt beef and pork, while many a time it would not have been taken for it, for it was so hard that sometimes we would carve this beef into snuff-boxes for our friends on shore. The bread (save the mark!) was generally called "hard tack"; and well it merited the name, except in those instances when we had to soak it in our tea to kill the weevils which infested it and honeycombed it through and through. Yet, I fail to remember having seen the smoker's tongue at sea.

Contrasting the sea diet with that generally found on shore, it is easy to see where the trouble comes from, without having to bring in the tobacco; and when I remember the many soothing effects I have received from tobacco in times of trouble, and the way in which it has helped me through some difficult problems, I can never condemn the use of tobacco, but only the abuse of it.

But I seem to have wandered a long way from my subject. It was while I was examining feces for hookworm that I became convinced that a softer consistence of the material I was working with would facilitate my work. This led me to an inquiry as to the general condition of the excrementitious matter, and then I discovered that a constipated condition among these hookworm victims was the rule. Not, though, that this constipation had anything to do with the presence or the absence of the hookworm parasite—I merely mention the fact but have nothing more to say on the subject in the present paper.

I had been gradually led to the question of intestinal antisepsis, but, as said before, had little faith in the possibility of accomplishing it. I did determine, however, to see what I could do in the matter and to convince myself one way or the other.

In any inquiry of this kind, I always like to have some definite aim and, to get this, I like to divide up a condition into its component parts, and the first, as I then thought, was the constipation.

I have found in these cases of chronic constipation that one of the first requisites is something that will soften the feces, and the two drugs I depend on are sulphur and compound jalap powder, the latter, however, not being strong enough as a rule and too bulky to be used comfortably. I find sulphur, in the form of sulphur laxative, No. 1, handiest to use. The dose is only four granules and there is no unpleasantness. In addition to this, a decoction of senna is a great help, but after a time this loses its efficacy. In that case something else has to be tried, such as fluid extract of cascara (the bitter).

With a view to the rendering of the alimentary canal aseptic, I added to the laxative some salol; but I found the customary dose too large and rarely gave more than 2 1-2 grains of it. Various combinations of these drugs seemed to have the desired effect, at any rate for a time, and I was thinking of arranging a cycle of drugs, so that when on one combination the patient should be constantly on the lookout for signs that its reign was nearly over and be prepared to begin with the next.

What Is "Smoker's Tongue"?

It was at this time that the smoker's tongue began to worry me more than usual, and I also had several patients who were afflicted in the same manner. Then it occurred to me that there must be some relation between the smoker and the condition of the alimentary canal.

The state of things was this: You would be smoking a mixture of tobacco or a single brand (I had been doing so for a month or two), without any trouble from the tongue, when one day you felt that unruly member had gone back on you and was in a state of irritation or even inflammation, which made your after-dinner smoke a torture instead of a pleasure. The tongue got worse and in many cases cracked, and anything hot produced the most unpleasant sensations. You naturally attributed this state of things to the tobacco you were smoking and so changed the brand. This, perhaps, gave some little relief, which, however, did not last long.

The state of the tongue could be alleviated by keeping a few tablets of chlorate of potassium and borax in the mouth, and as they dissolve very slowly some relief might be obtained in that manner; but it was only palliative. If you have several patients suffering in the same manner as yourself it is humiliating to feel that you cannot effect a permanent cure.

I was talking this matter over with a druggist, a qualified and very clever man, and he asked me if I had tried the sulphocarbolates. I told him I had, but only in a perfunctory manner. Then he told me about these remedies and was enthusiastic as to their properties.

Intestinal Antisepsis With Sulphocarbolates Solved the Problem

This set me thinking and, as he had told me of persons he had relieved and went into all the symptoms, I was able to figure out what he had done and how. Taking this with the knowledge I had already gained in getting rid of the constipation, I thought I began to see daylight and went to work on what I thought was the line to take and achieve my object, which was to cure the smoker's tongue.

I tried several combinations with Waugh's intestinal antiseptics in the foreground, but there was something wanting. After many trials with various combinations I found out what was wanted, and the treatment that has made the smoker's tongue a thing of the past with me is this:

In the first place, the constipation must be got rid of in the manner indicated at the commencement of this article, but when the condition is thoroughly understood there will be no constipation. When the first symptoms of irritation appear on the tongue I give from 2 1-2 to 5 grains of blue pill at night, followed by a full dose of saline laxative in the morning and a dose of the same on the second morning. After this has worked off, begin with Waugh's intestinal antiseptic tablets, taking 1 and 2 every three hours and gradually reducing the amount until the stools are a natural color and without odor. It will be necessary for the physician to watch the case carefully and see that the medicine is taken regularly. After about a week another dose of blue pill will probably be required; and for the future it is best to insist on a dose of blue pill and saline laxative being taken once a month. Waugh's intestinal antiseptics should finally be reduced to a tablet morning and evening, being careful to increase the dose if any signs appear of the old trouble. This treatment will not only relieve and prevent smoker's tongue, but will prevent the many evils that are attached to sedentary life.

The Ragweed Doctor

Explaining Why Some Physicians Fail

By MAYNARD A. AUSTIN, M. D. Anderson, Indiana

SOME farmers, whom I met, were discussing a neighbor, and one said: "How strange it is that Brown, with such a good farm as his father left him a few years ago, is not able to make both ends meet, and his biggest crop is ragweed." To which another added: "That isn't strange at all. Brown had good crops for a year or two, but he has robbed the land and he has robbed the farm. He hasn't put a dollar's worth of improvement into the farm; he hasn't added to the fertility of the soil; he has done nothing since it was given to him but take all that he could get and put nothing back in return." Then a third one of the group spoke up jestingly for my special edification: "That is just the way with a lot of doctors. Just like Brown, they are willing to take all your money, but it is mighty little you get in return and that which they spend for your benefit is much less."

As one thinks over the situation, the illustration, as it appealed to me, was most forcible; and in the experience of those of us who spend our money freely for new books, medical journals, instruments of precision for diagnosis, and the other things, there is so much solid truth that it hurts. Quite often my doctor friends come to me with their tales of wo. They tell of their trials and their misfortunes; they ask my advice about moving to another field; they question their future prospects in the practice of medicine; they speak of giving up practice and taking up something easier; they hear of occasional "soft snaps" and greater opportunities, only to find them preoccupied when they get around to take advantage of them. And so *ad infinitum*.

The past year has been an unusual one for doctors, throughout the central states. Probably less demand has been made for the physician's services than in many years; and few men among those in general practice or even those in special lines there are who have not suffered a considerable diminution in income because of the peculiarly healthfulness that has prevailed. But each physician who has spoken about this has seemed to feel that it was his own fault that practice business was poor, and expressed sentiments by saying that he "seemed to have lost out." In some instances one can see that this is actually the situation, and it might be well to show some of the reasons why they "lost out."

The Doctor Must Concentrate on His Profession

Some men whose apparent success has been sufficient to bring them a little competence, in the shape of accumulated property, have secured this at a greater cost than they have figured. In talking with a good friend the other day concerning a farm as an investment, he said to me, "Don't ever put your money in a farm if you think more of your profession than of farming, for you can't get a farm big enough to make you more than your income from your profession." This man is worth considerable money and it seemed to be a queer statement, but he explained further as follows:

"I bought a farm ten years ago, and it was a good one, but that farm has cost me more than its value in what I have lost from my profession because of it. My tenants have been average ones, but things have gone wrong, or demanded my time, or I have felt a desire to spend a day in the country in overseeing certain improvements, or I have taken money that I should have spent in taking a vacation and put it in the farm, or I have worried about some problem on the farm when I should have been thinking about my patients; and each of these factors have cost me a family or two, and in ten years the families whom I have lost have taken other families to their doctors, when they should have come to me."

Another, similar, incident occurred in my office a short time ago. A well-to-do farmer came to consult me, and after we had finished the consultation he said: "I suppose you know that Dr. Smith has always been my doctor?" "Yes," I replied. "Well," he continued, "I will tell you. We think a lot of Dr. Smith; but Smith is thinking more, nowadays, of other things than medicine. Smith was our doctor for years and when he would see us he would speak and ask how the folks were. Now when we go into his office he will probably say, 'Hello, John, how are your crops?' or he may ask how the hogs turned out or whether I have sold my

corn. I want a doctor who is thinking of how to cure me or my family when we get sick, instead of how much he is going to make or lose when prices of farm products go up or down."

A young physician—and apparently a successful one—settled down in a neighboring town a few years ago. He was fortunate in building up a good business in a short time, and made a venture in real estate, by buying a good farm and paying a thousand dollars down. Before the farm was entirely paid for, this young man came to me concerning the advisability of making a change. He said that he had been working hard, but that the people did not seem to appreciate him. He wanted to know about going to a city and starting a sanitarium.

He was a man to whom I could talk plainly and I advised against his moving. I told him that the people were taking him exactly as he was taking his profession. His professional work had ceased to be anything more to him than a means of making money to get his farm paid for. His patrons were beginning to realize this and they considered that his services were being rendered less for their benefit than for his own pocketbook.

Within the past few weeks three physicians have come to me concerning their physical disabilities. Each of these physicians has passed middle life, all of them are suffering more or less similar symptoms, with evidences of premature old age, strain, both mental and nervous, and all of them showed the effects of burning the candle at both ends.

One of these three was a country doctor, a hard-working man who had gone night and day at the call of everyone who needed him. He had made a living out of his work, but he had saved nothing, and when I advised him to go to a more mild climate and spend the winter, he objected: "Doctor, I am sorry, but that is impossible. I should have to sell my home, and that is all that my wife and I have." A short time afterward I was in his neighborhood in consultation and his neighbors were telling me about the doctor's illness. They spoke highly of him in a friendly way, but blamed him consistently for his poor business methods. His books were never posted; he never sent out statements; those who could pay him well did not; those who would have paid him neglected to do so; and the people in the community valued his services at the price he placed on them, which was little or nothing.

Since his illness began, he has tried to get his books straightened out and to collect in his money, so that he may take a much-earned rest. His new methods are being resented, and the length of some of his bills is making him enemies. His patronage has fallen off, and his work is going to other men in the neighborhood.

A physician in a neighboring city, whom I knew very well, through shrewd investments accumulated a number of pieces of property, most of them for rental purposes. For several years he employed a "Jack of all trades"—and a valued man to him—to look after his outside affairs. The man kept up the repairs, he looked after all the complaints, he collected the rents, and in this manner added to the doctor's bank-account without detracting anything from his professional work. The handy-man and the doctor became estranged and the former sought new employment.

Then the doctor undertook to look after the rents, repairs, complaints, improvements, and within a short time his professional work was a secondary matter. His time was taken up in looking after the painter, the carpenter, and the plumber, and his thoughts were about some past-due rent or a vacant house, instead of his patients. His tenants usually left in anger and their enmity and bitterness were related to their friends. Within three years this man's professional income had decreased fifty percent and the loss of his professional prestige so embittered him that he quit practice and moved out of the state.

The profession of medicine is a jealous mistress and can brook no rival. Once in a while we will hear of some fortunate doctor who has a profitable side-line. Doctors who have tried to establish side-lines are as numerous as the gold-mining certificates that have been sold to members of the profession. But such a successful man is as rare as the dividend-paying gold-mine. Such men in our profession as the one described should be classed with the ragweed doctors, even more so than the humble, patient Micawber likeness of a generation ago, who had no opportunities of perfecting himself in the methods of diagnosis and whose field of labor has been among the class whose fees were the very least.

The Ragweed Doctor Does Not Improve His Mind

The foregoing is not meant to dissuade the physician from having a hobby or diversion—for the strain of his work is too great to be carried without surcease all the time. This hobby or diversion should be such a one, how-

ever, that profits should not be considered as essential. The profit part of any diversion carries with it as much strain as the professional side of his work. It should be something that gives recreation, diversion, and more pleasure than can be estimated in money-value. A professional man should make his profession his sole source of income, and should make his services so valuable that no diversion can carry any temptation for estrangement.

In a community with more than two hundred physicians that I know of, there are fifty who are fifty years old, or older, and of these but five are conspicuous by the interest they take in their profession. One hundred others there are of an age between thirty-five and fifty, and it is painful to relate that the greatest element of their conspicuousness is their scramble after the dollar. Says A to B, "Why weren't you at the society meeting?" Says B to A, "I had a patient coming into the office and could not leave." Says A to C, "Why weren't you out to hear the lecture?" and C replies that he had a call to make. There is an old saying that the higher one goes, the harder he falls when he drops, and such excuses are worse than none, for only in emergency cases is our time so completely owned by our patients.

The ragweed element is not necessarily absent in the man who apparently is successful, judged by the amount of business that he seems to do; and, yet, his success requires an iron constitution and ability to work night and day in order to keep things going, because it is the quantity of work that he does that permits him to make both ends meet.

This type of man apparently is always busy, in fact he gets to the office by seven in the morning and frequently stays until midnight. His home is a secondary proposition; he becomes fearful of the time when his income shall decrease; he worries when he hears of a chance call that he has lost, for it is only when quantity keeps up that he can make himself feel justified with his business. His profession has become a business, and his business is to sell cures. His library and equipment shows little increase from the time he left college. His stock of medicines, if he dispenses, are the cheapest that he can buy, and his shelves contain a plentiful supply of multicolored placebos.

This kind of a doctor is to be considered a more ragged variety of the ragweed kind than the poor fellow who had nothing to start with, little or no tact, and barely ekes out a livelihood, and who for financial reasons has been unable to procure more than the barest essentials for his work.

The changes in the practice of medicine in the past fifteen years have been remarkable. The large practice of many physicians of a generation ago consisted in supplying much medicine that we now consider in great part unnecessary, the fever powders, tonics, liver regulators; some of the survivals continuing even to this day treating everything with a little quinine because of the amount of malaria they saw in the early days. Of course, every dispensing physician has a few staples which he gets in the habit of giving out, even though his work does not run largely to one class of cases.

That which adds to the raggedness of the ragweed members is not alone the fact that they seldom or never spend any of their income for books and medical journals, but, if they do, they seldom read them, while few or none of them, after leaving college, have been on the inside of a hospital or a post-graduate school. They spend no money on vacations of any kind, and in this respect become more ragged than ever.

There is an old saying that where the family depends on the husband, he makes them a living; that where the husband and wife both labor, all they make is a living; and where the man and wife and children all go out and work, they make only a living.

So it is with the profession. A professional man who cannot make a living in eleven months, and save something, does not make a living in twelve months. The man who does not take at least five percent of his income and ten percent of his time for the benefit of himself in taking a vacation will ultimately find that his candle has been burned at both ends. The man who spends his money on himself and takes an occasional rest, who goes to the city and sees things that the other fellow is doing is the man who does the best work, who gets the best fees, and who saves the most money. He does not necessarily have the biggest business; but it is far better for the patient and the physician that the physician should see only a few patients and give them all the time necessary for diagnosis and treatment, rather than to see a large number of patients who are dosed with the most convenient tablets or given the quickest relief with the ever-ready hypodermic.

There are more men practising medicine with an element of bitterness in their hearts than is good for the laymen to know about. There are many men who sit at the bedside

with their hand on the pulse of a patient and think about their overdue insurance or their past-due rent or drug bills, instead of counting the beat of the pulse or considering its rhythm, or estimating the blood pressure, or questioning the quality of the blood as it passes under their finger-tips.

Four Types of Doctors

There are four distinct types of physicians with whom the laity should be concerned. First, there is the progressive young man with one or two years' hospital experience following his graduation from medical college. The second type is represented by the young man without hospital experience, who must gain his knowledge and develop his technic at the expense of the community. Some of these men develop into our ablest practitioners. Others, who were too anxious to "get busy" to put the time of a hospital-year into their training, soon cease to grow in a professional way, and their future is that of the next, the third, class; that is, the middle-aged or older vegetating, hibernating kind, who know nothing of vaccines or serum therapy, who ignore the physical demands of their patients for something more than pills and powders, who can see no good in mental therapy save for that patient whom they in ignorance call a "hysteric"—those whose egotism is surpassed only by their jealousy and who only too frequently do things for a price. To the fourth class belongs the middle-aged or older man, whose training has been the best to be had at the time he was graduated and whose subsequent work has been supplemented by frequent visits to the medical centers and whose reading keeps him abreast of the times.

Two letters that were received following the publication of a well-intended effort to arouse some of the "dead ones" in a certain community indicate the self-satisfied egoism of men of the third class and the true professional spirit of those of the fourth.

The first letter says in part: "Please allow me to voice my disapproval of the publication of your recent letter about the affairs of this county. Such letters do not help the profession mentally and put us to scorn with the laymen." The other letter, how different it sounds: "I am not sorry that the article was published. I am sorry that it is true, for many doctors are all but criminal in their lack of interest in their work, which means life or death to the patient. As Dr. Anderson, of Newport, Kentucky, says: 'Your call to the service of the healing art is not the call of wealth, or fame, or distinction, or ease or comfort, or long life, or popular favor, or personal aggrandizement, or social distinction. It is the call to war, a lifelong enlistment on the side of humanity in its grim struggle with disease and death.' In his reference to higher ideals he says: 'It makes a mute appeal from the silent graves of the untimely dead that ask of us their rightful years cut off.'

"Doctor, if we receive the blame, is it not because we deserve it? In my town there are six physicians, and, to think! three of them do not believe in the use of antitoxin, even when we know that its use has reduced the mortality from diphtheria, in New York City, from 264 in every 100,000 inhabitants thirty years ago, to 28 per 100,000 now. In Chicago it has reduced the mortality in fourteen years 73 percent. And, yet, doctor, these three men are just as much entitled to practise medicine as you or I. No one can interfere and say that they may not practise. No doctor reviews their work, and not even the hand of the Omnipotent God is stretched out to save the little children that come under their care. Every Decoration Day some mother goes to the cemetery with flowers, to lay on the graves of her untimely dead who cry out for those rightful years, cut off because of these doctors' neglect in taking advantage of positive medical advances."

The layman is to be blamed as much as the physician if he gets less than he pays for when he calls upon a physician in time of need. The layman chooses his physician as he chooses his grocer—because his neighbor trades there. Many laymen allow themselves to be "worked" by the professional parasites that are to be found in every lodge in the country. Let someone of the doctor's family become ill, and then he will realize how much or how little he and his professional brethren are giving to the community. You will find that doctor questioning the ability of his friends and probably calling in his bitterest enemy; and it is because he realizes that his enemy has an ability that is necessary at that time.

Lodge practice has been making rapid strides in every direction in this country, and, while it may appear in the future as an economic necessity, the profession alone is to blame for its present encroachment. The future possibilities in this direction depend directly on two things—better work of the individual and greater cooperation among the physicians themselves.

To overcome the demands of lodge and club practice, a higher grade of work must be

done than can be afforded by a club- or lodge-doctor. When equally as good work can be secured from the lodge-physician for $2.00 a year as can be secured from the average practitioner who might charge $2.00 a visit, it is obvious that the former method will be taken advantage of by the laity.

Too many physicians consider quantity of business and an early success to be the greatest thing to be desired. And, yet, this is too often the cause of their ultimate failure. Like the present epidemic of divorce among our trust magnates and newly rich, the old wife isn't good enough for the full pocketbook, but when the divorce has been secured, the man finds out too late that the new one is too much for his empty pocketbook.

The layman should choose his physician as one who comes into his family as a counselor, as a friend, as one who can stand in the pathway of death. He should be chosen from among those of his own class; for the professional man, when he is a true physician, reaches a time when families who have been loyal to him, whom he has served in matters of life as well as death, are not only patients but more than friends, and he feels toward them that they are part of his own. Their loyalty expresses something of greater value than any fees that may have been paid to him. There comes a time, as the years go by, when the older physician has watched the infant daughter grow into womanhood and become a mother, that this second generation seems to him in many respects like grandchildren of his own.

This is the Ideal, this is the *Summum Bonum* that the profession can give. This to him will be more than farms or rental property, stocks or bonds; for, after all, the more that he had of earthly possessions, the more does he worry for fear of their loss. Not but what the profession should give us something more than a livelihood, but it should give us more than a living—it should give us happiness. And we, the doctors, should put into our profession measure for measure of what we take out.

Guatemala—A Land of Promise

By CARLOS F. SECORD, M. D., Chichicastenango, Guatemala

CENTRAL America is now much before the people of the world, and there is great and growing interest shown toward that land by the American people. Many, however, think of the little Latin republics to the south of the United States as jungles where revolutions and yellow-fever incubate, and where nothing good can be found. In olden times it was asked, "Can any good thing come out of Nazareth?" and practically the same thought nowadays is prevalent concerning Central America.

Twelve years ago the writer located in Guatemala, the largest of the Central American republics, and established a modern medical mission among the Quiche Indians, descendants of the ancient Toltecs; and he has been an interested student of the conditions of this country. As all things material obey the law of evolution, so Central America is today passing through a period of radical change, and nothing but good for the entire world can come from it.

Favored with many distinct climates—from the hot, low-lying coast region, to the cold, dry heights of great mountains where the million Indians live and die in their ancient customs and as yet barely touched by civilization, holding tenaciously to the traditions of their fathers—great and startling extremes are met: squallid poverty, ignorance and superstition are seen on the one hand, and modern cities, arisen as if by magic, exemplifying the height of civilization on the other. Starting with the banana plantations along the coast, a succession of products is met with, including sugar, cacao, coffee, and others, and then, as the altitude increases, corn, wheat, oats, and such like are encountered in great abundance. Old Mother Nature could not be kinder to her children than she has been to the bronzed races of the Southlands.

Living being so easy, the people heretofore occupied themselves with conducting revolutions, which served as a safety-valve to their surplus energies, and incidentally to satisfy their ambitions; the better feeling, today, however, is against lawlessness, and there is a general desire for peace.

All the Central American countries have struggled and suffered for centuries, before and after their liberation, and some of them still are in difficulties. Mexico enjoyed many years of peace and prosperity, her lands were cultivated, mines were opened up and count-

A new and modern hospital at Guatemala City.

less industries established, until with advancing age the strong hand of Diaz weakened and restraint was removed from the lawless. Now under the reign of brigandage lives and property are being destroyed, and the whole thing has become a serious problem for the United States to solve.

But, while unrest and revolution have been so prevalent in some places, Guatemala has rapidly forged ahead and today occupies an enviable position among the states of the isthmus. This is due largely to the superiority of the man at the head of affairs, a strong man possessed of a happy combination of energy with prudent executive ability and a special love for the people and government of the United States—something so often lacking in the other rulers of the Latin-American lands.

Under the present régime, the arts and sciences, including medicine, have been favored in a remarkable way, and the readers of this journal may remember the remarkable way in which the yellow-fever and later the smallpox epidemics were combated so successfully. Schools and hospitals have been multiplied, and special inducements offered for scientific research, especially as relating to tropical diseases and botanical investigations, and numbers of useful discoveries already have been made. President Cabrera personally is an ardent student of current scientific problems, and for this reason he is a sincere friend and protector of the medical profession and continually seeks its well-being and advancement.

Recently a beautiful building was erected and dedicated as a maternity hospital, in honor of President Cabrera's mother, and the very latest methods are in use there, hundreds of poor women finding in him a true protector and their children recognizing in the great-hearted man a benefactor and foster-father. The only love of his life has been that bestowed upon his mother, and now that she is dead he honors her memory by doing good.

In November another handsome building will be formally opened, which is to be devoted to modern surgery and will be supplied with all modern approved apparatus and fitted with a perfect laboratory. In these two buildings American trained nurses

Quiché Indians worshiping at the graves of their ancestors.

Ancient Toltec Ruin.

Picking coffee in Guatemala.

will be employed, which already have been selected. To THE AMERICAN JOURNAL OF CLINICAL MEDICINE President Cabrera owes much of his knowledge of American scientific thought and research, as he is an enthusiastic reader of its delightful pages from month to month, in addition to a number of other American and European magazines.

It is refreshing to find a man at the head of a Latin republic who unites in his person so many qualities of greatness, and the natural result is the rapid advancement of the medical profession, with the certain adoption of the principles of alkaloidal medication more extensively in the near future.

The Iced Summer Drinks

Their Effects and Defects

By CHARLES F. LYNCH, D. V. S., Chicago, Illinois

EDITORIAL NOTE.—This is the second paper in Dr. Lynch's series on "Food Adulteration and Sophistication," which began in the October number of CLINICAL MEDICINE. *In a succeeding issue Dr. Lynch will discuss the adulterations of coffee, tea and spices; in another number, meat inspection; other topics being taken up from month to month. We urge our readers to peruse these papers carefully. They answer questions which every doctor is expected to be able to solve.*

EACH successive summer the sale and consumption of carbonated beverages by the American public shows vast increases, from the baseball-fan who sits in the bleachers and sips his bottle of "root beer" or "cola" to the toddling youngster who takes his pennies to the corner grocery, there to exchange them for a bottle of beautiful sparkling "pop" just "off the ice." This form of beverage finds favor.

As the hot, sweltering days of summer with their thirst and discomfort approach, the soda-man prepares to dispense his cold invigorating beverages, to assuage the thirst and dispel the malaise of his suffering patrons. This intention on his part is highly com-

mendable when the beverage he serves is a pure, wholesome, unadulterated one. On the other hand, when an impure, unsanitary, artificially colored, dope-laden product is passed out to the unsuspecting customer, who is only too often an innocent child with highly sensitive digestive organs, the practice cannot be too severely condemned.

Varieties, trademarks, and brands of the soft-drink products are legion. Many of the names used are flagrant misnomers of the product, the composition of which they pretend to portray. Even the common name "ginger ale" is in point of fact a misnomer, as the product is not an "ale" in the correct sense of the word, for by the term "ale" is understood a product which is formed by a process of alcoholic fermentation.

Lead Not Infrequently a Contamination

In considering the etiology of the epidemics of gastrointestinal disturbances which affect the children of our larger cities every summer, the role of the carbonated beverages in their production often is overlooked. While in the small child and bottle-fed infant milk of impure quality or of improperly balanced chemical composition is an all-absorbing factor, in the older child the carbonated drinks are an important source of danger and one demanding the attention of the intelligent up-to-date practitioner who desires to safeguard the health of his youthful charges.

During the summer of 1910, while engaged in the service of the Chicago health department, I had occasion to observe an epidemic of severe gastroenteritis among the children of a district in the northwest part of the city, which was traced to contaminated carbonated beverages. Samples of the product from the factory in question were taken by Dr. Heide and myself and upon chemical analysis showed the presence of considerable quantities of lead salts, sufficient to produce symptoms of plumbism in a physician who drank a considerable quantity of the product. The effects of such a beverage on the delicate structure of the infantile gastrointestinal tract may easily be imagined.

The etiology of this epidemic for several weeks was unintelligible to a score of practitioners in the involved area. None of them had thought to consider the popular summer drink as the cause of the severe gastrointestinal symptoms manifested by their patients. Prompt action by the city and state authorities in forcing a correction of conditions at the bottling plant resulted in an immediate subsidence of the outbreak.

In considering carbonated drinks, one of the first points to be investigated is the sanitary conditions under which the product is prepared. Many of the socalled pop factories, especially in our smaller cities and the congested areas of the large cities, are located in most unsatisfactory places: basements, barns, coalsheds are often the home of such bottling plants. A clean, wholesome product is impossible amid such surroundings.

Unclean bottles is another source of danger. No bottle should be used as a container for a beverage intended for human consumption (and more particularly so if intended for young children), which has not been thoroughly washed and sterilized. In many of our factories but little attempt is made at thoroughly cleaning the empty bottles and sterilization is rare except in those plants under strict supervision by health officials. Needless to state, the water used as a basis for the product must be pure and free from organic or bacterial contamination if the finished product is to be wholesome. Bacteria of typhoid fever, dysentery, tuberculosis, and other communicable diseases may readily be conveyed in pop-bottles.

In many establishments rubber-faced lead stoppers are employed. This was the case in the plant responsible for the Chicago epidemic of gastroenteritis above referred to. The action of the carbon-dioxide gas with which all these carbonated products are charged and to which they owe their characteristic palatability acts most enthusiastically on these lead stoppers and the result is a heavy deposit of highly poisonous lead oxides in the liquid, with no change in the physical appearance of the beverage to warn the consumer of its injurious character.

Carbonated beverages have another source of contamination with these deadly lead salts in the pipes through which the charged water is drawn to the bottling machine. If these pipes are lead or lead-coated, the oxidizing power of the carbonated water is sufficient to carry highly appreciable amounts of the lead salt into the product.

Objectionable Artificial Sweetening and Coloring

All carbonated drinks are made so as to have a pleasant sweetish taste, this appealing to the palate of our young American folk, who notoriously are fond of sweets. When this saccharine property is due to the presence of pure sugar, it also imparts a certain amount of food-value to the product. But, as is frequently the case, when the coaltar derivative saccharin is used as a substitute for sugar,

a gross fraud is perpetrated, in that the finished article is robbed of an ingredient possessing an appreciable food-value and a substitute of questionable character put in its place.

The Referee Board of the federal Department of Agriculture has condemned saccharin as a food-product, although this decision was robbed of much of its value by being too largely tempered by a voluminous wording.

Saccharin is a derivative of the coaltar series, and possesses a remarkable sweetening power, being from four hundred to five hundred times as sweet as sugar. That is to say, one pound of saccharin will sweeten as large a quantity of water as five hundred pounds of the best cane-sugar, while the cost of saccharin is comparatively small. A quite wonderful product indeed from the standpoint of the manufacturer, and an equally brilliant deception of the consumer. The ingestion of even small quantities of this drug (for drug is the proper classification of the product) by children throws an added weight upon the highly sensitive kidneys and cannot be other than harmful to the individual.

Fraudulent Substitutions

But adulteration of these beverages does not stop here. The syrups used for flavoring the various carbonated drinks often are found to contain large amounts of sodium benzoate, salicylic acid, and similar preservatives. Considerable amounts of these substances not infrequently are also added to the finished product to prevent any fermentative changes.

To produce the beautiful "strawberry"-shade and other colors characteristic of the various varieties of "pop" on the market, the coaltar-dye manufacturer lends a most willing and efficient hand, with a resultant addition to the potency of the beverage as a producer of toxic effects in the consumer.

The beaded foam in the glass frequently is due, not to the carbon-dioxide gas present, but rather to the addition of saponin—a highly toxic extractive from soapbark, and a substance the presence of which should be absolutely prohibited. This use of saponin in any form is a vicious practice and one that cannot be justified in any manner. In justice to the trade, it should be stated that this adulterant is rarely utilized by reputable manufacturers.

Ginger ale is a drink which is highly relished by a multitude of patrons all over the country. When properly made, it contains an appreciable amount of the characteristic constituents of ginger, and it is both palatable and appetizing, owing to its condimental and tonic effects.

But, as in other branches of the trade, here too the unscrupulous manufacturer has seen an opportunity to sacrifice quality to cheapness, and instead of the ginger a small amount of capsicum is added to the ginger ale, with a resulting sharpness even more pronounced than that due to the ginger, and that with a great saving in cost—a very small amount of capsicum serving the purpose of a large quantity of ginger.

Gross examples of misbranding are to be found in such products as "pepsin ginger ale," "iron brew," and "sarsaparilla pop." The pepsin, iron, and sarsaparilla which these beverages are supposed to contain, and which are used as a basis for most extravagant advertising claims, more often are absent than present, and when present, are in such infinitesimal proportions as to be discoverable only by the keen and expert chemist.

Criminal Addition of Narcotic Drugs

But by far the most dangerous of all the adulterants added to our summer beverages are the narcotic drugs, and they are added for a twofold purpose, namely, to impart a stimulant property and to produce a habitual desire for that particular beverage; in other words, the establishment of a drug-habit! These unscrupulous manufacturers are willing to make drug-fiends of their patrons in order that their sales may increase and repeat orders may flourish.

Many of the widely advertised beverages have long been suspected of containing coca-leaf extractive, with that most fiendish of all narcotics, cocaine. Others openly admit that their product contains caffeine, which alkaloid, while far less injurious than cocaine, nevertheless is a most unsuitable constituent of a beverage consumed in large quantities by small children with their highly specialized and responsive nervous system.

Coca or its derivatives in a beverage offered for unrestricted sale should not be tolerated for an instant, and concerted efforts should be made by medical authorities in every city and state of the Union to drive this class of beverages out of the market.

No physician who has witnessed the effects of cocaine as exhibited by a habitué of that drug can sit complacently by and see the foundation of this most insidious and fiendish of drug-habits established, in his own children, and those of his patients, under the disguise of a beautifully colored, sweet-flavored car-

bonated beverage, aided in its devilish work by ingenious publicity.

Ice-Creams Swarm with Pathogenic Bacteria

Next to soda-pop, the ice-cream soda is the hot-weather delight of the small child. Unfortunately here also the health of the child is grossly endangered, and those sparkling eyes and smacking lips that are buried in the delights of the foaming soda are all unaware of the millions of disease-breeding bacteria that are included for the nickel, along with poisonous preservatives and dangerous chemical dyes.

It is almost unbelievable, the bacterial content that can be found in ice-creams carelessly prepared. In the city of Washington out of 263 samples of ice-cream examined bacteriologically the following results were reported:

Less than 10,000 organisms per Cc.	0
From 10,000 to 50,000 organisms per Cc.	0
From 50,000 to 100,000 organisms per Cc.	0
From 100,000 to 250,000 organisms per Cc.	2
From 250,000 to 500,000 organisms per Cc.	3
From 500,000 to 1,000,000 organisms per Cc.	14
From 1,000,000 to 2,000,000 organisms per Cc.	23
From 2,000,000 to 5,000,000 organisms per Cc.	34
From 5,000,000 to 10,000,000 organisms per Cc.	50
From 10,000,000 to 25,000,000 organisms per Cc.	64
From 25,000,000 to 50,000,000 organisms per Cc.	42
From 50,000,000 to 100,000,000 organisms per Cc.	15
Above 100,000,000 organisms per Cc.	16

This shows an average number of nearly 27,000,000 organisms per Cc. In one sample the enormous count of 365,000,000 bacteria was reported. That these organisms were not harmless is shown by the fact that in 38 percent of these samples the virulent streptococcus was found. The effects upon the "digestive tract of a steam-engine" of such myriads of pathogenic organisms would seem almost certainly to spell death; but when we consider the introduction of such large numbers of such a virulent organism as the streptococcus into the readily susceptible digestive tube of a child, it apparently is miraculous that the morbidity among these children does not reach 100 percent, with an almost correspondingly high mortality.

Fraudulent and Harmful Ice-Cream

Another frequent practice in the ice-cream trade in certain parts of the country is the manufacture of a variety of ice-cream which is stored for a considerable period of time before use. It is a very common practice before such holidays as Fourth of July, "Circus Day," "Fair Week," etc., to make up a considerable amount of cream and pack it for use during the holiday rush. If it happens to rain on the expected big day and the trade is slack, these goods may remain on hand for several days before being finally disposed of. The temperature at which these goods are stored is not sufficiently low entirely to suspend the activity of the contained bacteria, and the result is not only a marked increase in their number but there is also a production of those dangerous, frequently fatal, chemical products of bacterial activity known as ptomains.

Many ice-cream freezers and containers are in part lined with lead and in the process of manufacture the friction not infrequently results in the deposit of appreciable quantities of lead salts in the finished cream.

When correctly made, ice-cream should be composed of pure cream, sugar, and flavoring. In many parts of the country such a product is practically unknown. The following formula is one which found a large sale among the trade not long ago at five dollars:

"Powdered gelatin, 7 pounds; dextrin flour, 3 pounds. Mix thoroughly. A powdered gelatin good enough for this purpose can be bought for 20 cents per pound, and dextrin flour for 3 cents per pound. Mix 1 pound of this mixture (costing 15 cents) with 5 gallons of milk (not cream) and freeze."

This is quite an "improvement" (?) over formulas consisting of cream, sugar, and flavoring. Yet this adulterated product has been sold, no doubt, in thousands of parlors, as the genuine, pure article, and at full price of the true product made with cream alone.

Other adulterants which have been used from time to time are numerous, but gelatin, starch and dextrin powder are among the favorites. Speaking of dextrin, one of the trade booklets says: "It doubles the quantity; saves one-half the labor; it saves one-half the ice; it saves one-half the salt; it keeps them twice as long; it will not separate; it will not ice; and it can be bought for *3 cents a pound!*" A boon indeed to the get-rich-quick manufacturer, who has no consideration for the quality or the purity of the product he serves his customer, so only it brings the cash to the till.

Another business-getter—for the undertaker—in recent years has been the adulterated ice-cream cone. The harmless-looking, attractive receptacles for the penny spoon of ice-cream have been found, in many cases, to carry large quantities of harmful and deleterious colors, instead of an excess of pure eggs, as their color would lead the purchaser to believe. The effect of these chemical sophistications upon the digestive tract of the child is anything but salutary. Thousands of these cones have been found to owe their

beautiful yellow shading to a peculiar type of "egg" that responds to the tests for coaltar dyes or equally deleterious mineral colors.

Unfortunately many honest dealers counteract all the good qualities of a pure, properly prepared product by careless methods in handling and serving the article. Glasses are used again and again with no cleansing beyond rinsing in a vat underneath the counter, the water in which is changed at quite uncertain intervals. Such cleansing methods are just a bit worse than no attempt at cleansing whatever. No glass should be used for serving soda-water to a customer after its use by another until it has been washed in an antiseptic solution and excess of the antiseptic removed by clear fresh water, or, better still, until it has been sterilized by boiling water or steam.

Praise for Pure Ices and Cold Drinks

As to the dangers associated with the use of cold drinks and ices, I do not agree with those who would entirely taboo them. Iced products, properly made from pure, wholesome ingredients and served with due respect to cleanliness, are wholly commendable. They relieve human suffering and discomfort and at the same time have a certain food-value.

In the treatment of some of the more severe gastric disturbances, ice-cream is a most satisfactory article of diet, combining palatability with excellent nutritive qualities; for a properly prepared ice-cream should carry at least 14 percent of butter-fat, besides proteids and sugar. This of course does not apply to products made up largely of gelatin, dextrin, skim-milk, and similar substances.

Let the children have their ice-cream, their soda-pop, their lemonade, and their ice-cream soda. They will be more comfortable and will suffer no ill effects; but insist on the purity of the product served, do not allow them to be used in excess, and, moreover, they should be ingested slowly. A glass of these cold beverages should never be gulped down rapidly. The sudden chilling of the gastric walls often produces severe effects, and may, in extreme cases, result fatally. These beverages should be sipped slowly and ice-cream eaten without haste. Not only are harmful effects thus prevented, but the cooling and thirst-relieving properties of the liquid are thereby very much enhanced.

WHEN one turns to the magnificent edifice of the physical sciences, and sees how it was reared; what thousands of disinterested moral lives of men lie buried in its mere foundations; what patience and postponement, what choking down of preference, what submission to the icy laws of outer fact are wrought into its very stones and mortar; how absolutely impersonal it stands in its vast augustness—then how besotted and contemptible seems every little sentimentalist who comes . . . pretending to decide things from out of his private dream!—William James.

Authority

Its Relation to Therapy

By GEORGE L. SERVOSS, M. D., Gardnerville, Nevada

THE word authority has numerous definitions, some of which are as follows: "(1) Power or admitted right to command or act, whether original or delegated. (2) The power derived from opinion, respect, or long-established reputation; influence, conferred by character, office, station, mental superiority, or the like. (3) Power in in a general sense. (4) A person or persons, or a body, exercising power or command. (5) The outward marks of authority; especially, the expression of authority in the countenance. (6) That to which or one to whom an appeal or reference may be made in support of any opinion, action, or course of conduct.

We hear much of authority in medicine, and the term as here applied would fall under the definition given in the "Century Dictionary" under 6 as well as under 2.

Thus, an authority in medicine is supposed to be a man or a body of men who, by virtue of superiority of mind or ability to come in contact with and recognize certain things, establish themselves, through their writings or otherwise, as those to whom references may be made by the rank and file of the profession, the latter not having been so blessed. Many of the socalled authorities, while their advantages have been broader than those of the majority, have not become so because of such advantages, but through their ability to assemble facts, discovered by others, in such form as to be easy of reference when printed. Many of our textbooks, especially upon the subjects pertaining to internal medicine, are but compilations of the ideas of those who have gone before. Many of the socalled authorities give us but little of their own personal findings and only very little in the way of modern ideas appears in their books.

In the treatment of the sick, we find that many of our accepted authorities are still clinging to the idea that there is little, if anything, of value in the internal use of drugs, and more especially is this true relative to the treatment of acute infections. Many of such diseases are classed as self-limited—as conditions that will care for themselves—regardless of any medication whatsoever. This is the idea of many of the accepted "authorities."

When a man or a set of men is given a certain power, it inevitably follows that such become, in a sense, narrow of mind; in that, having been invested with such power, they gain an idea that they, and they alone, must be looked upon as the only ones capable of advancing any ideas worthy of note, while anyone, other than a recognized authority, who would promulgate any idea invariably is subject to greater or less scorn.

It is true that the average authority in medicine is in a position to observe many more patients and a greater variety of disorders than is the man practising in some obscure corner of the country. But how many of the accepted authorities come in as close touch with their patients as do these obscure doctors? The authority not infrequently limits himself to a consultation practice and only sees a patient once or twice, while the obscure practician follows his cases from beginning to end, frequently acting in the capacity both of doctor and nurse, and in this way sees every phase of the condition under treatment. While the latter may not, and frequently does not give his findings to the world, he undoubtedly is in a better position to give voice to ideas of practical worth than is the recognized authority.

Certain sets of laboratory experimenters are accepted as authorities relative to the use or non-use of drugs in the treatment of the sick. Many such men are not graduates in medicine, and, aside from a knowledge of the chemistry of the materials under observation, know but little, if anything, of their worth as remedial agents. They do not know the effects of such drugs when applied clinically to the sick. Their ideas, in so far as the physiologic action of the drugs may be concerned, is based upon their effects upon animals in health, and no account is taken of any difference in effect in sickness and health. Still, we are expected to accept such findings as final.

Other men, associated with such bodies, although they may be graduates in medicine, are not in active practice and, in so far as the drugs employed are concerned, have but little more idea of their actions in sickness than have the chemists of such boards, councils or what not. We are asked to accept the

latter as authorities in much the same manner as we do the physiologic chemists. Such findings must be accepted, regardless of the lack of practical experience.

In other walks of life, it is well to remember, only solid facts are recognized as of worth. The application of a drug to a healthy animal in no wise proves that it is worthy or unworthy of application to the sick human, as it may have an entirely different action in the latter. Consequently the assertion of an authority based upon the findings of the laboratory is, in many instances, absolutely worthless to the practical physician.

Many drugs of real clinical worth have been thrown aside by the physiologic chemists, for the simple reason that such agents have shown little, if any, effect upon the healthy animals to which they were given. Practical clinicians, many of them country doctors, have, on the other hand, found such condemned drugs of great worth when administered to the sick. Which, then, should be the recognized authority in this relation? It would seem that the clinician would outrank the chemist and the medical man who does not practise, in that he has applied the agent in a practical manner and obtained appreciable results.

Many of those who are accepted as authorities seem liable to frequent changes of mind and to be governed to a considerable extent by the ideas of others. The practical clinicians, on the other hand finding drug actions and effects through their own observations, are more prone to stand by their colors day in and day out, as they know in a practical way what to anticipate.

Many drugs have been pronounced worthless without a single clinical application on the part of the investigators in the laboratories. But in the hands of the clinicians these same drugs have been of such value as to have been adopted by the latter class, regardless of the pronouncements of the accepted authorities to the contrary.

The question now arises in our minds as to whom we should accept as authorities concerning the applications of drugs and other remedial agents. Shall it be the man who acts merely as a consultant and sees his patients but once or twice and does not observe all the details of the condition? Shall it be the chemist who, through analysis or application of such agents to healthy animals, obtains a basis for his deas as to the worthiness of the remedy under nvestigation? Or, finally, shall it be the busy practician who is daily applying drugs in case after case of ill-health and who is watching every action and effect of his remedies? Who, of the three, is practical?

It would seem clear that the latter class might well be considered the better authorities. They are in active practice and are practical in every way. They know, absolutely, the condition toward which they are directing their weapons of combat and recognize the effects of their warfare. In other walks of life we find that the practical man is the one looked up to as the authority. It is not the engineer who sits in the office and preaches theory, but the one in the field who does practical things who obtains the ears of those who would have advice. The office-lawyer may tell the man in the court-room how to conduct his cases, but it is the latter who is accepted as an authority upon trial practice. A man who had studied the theory of flour milling might be able to direct the flow of stock ordinarily, but he would not be accepted as an authority regarding the handling of different sorts of grain, as his ideas would not be accepted as practical.

These things which are true in other lines of endeavor are equally true in medicine, and the practical should rule in one as well as in another. We should accept the findings of the practical and successful clinician in preference to those of the theorist, or the man who gives but scant attention to the practical application of remedies, either in the laboratory or clinically.

The fact that the practical clinician is so frequently not known as an authority is due to the fact that he either has not the time to promulgate his ideas and findings, or has not the faculty to make such knowledge public through either spoken or written words. Many such men are fearful that their ideas will not be accepted, or, being obscure country doctors, are likewise fearful that, should they promulgate any such ideas, they might be subject to more or less ridicule. They fail to recognize the fact that many of the accepted authorities were originally in the same class as themselves, obscure country practicians, but that, through expounding of their ideas, based upon practical findings, they have been able to bring themselves to the forefront in medicine.

Despite the fact that the country physician may not be accepted as an authority, he should not hide his light under the bushel, but should make known his findings whenever out of the ordinary. It frequently happens that a few words relative to some seemingly trivial thing are worth more than is an entire

chapter, and the practical doctor, no matter where he may be located, can advance new ideas upon little things of this sort, and he should do so whenever possible.

Only very recently has an obscure doctor in one of our western states found that certain mixtures of microorganisms were effectual in remedying certain pathologic conditions, and through making his findings public he has not only become a recognized authority, but has conferred a blessing upon both the medical profession and suffering humanity. This man was practical, in that he based his ideas upon practical applications of a certain remedy upon persons in ill health. He was not then an authority, but he became one, regardless of the chances of possible scorn and derision arising from the then recognized authorities, so called. Every doctor should be an authority—and he may be. All he has to do is make public his findings if worthy of it.

What Shall the Doctor Read?

A Little Chapter of Practical Advice

By FRANK L. ROSE, M. D., Jackson, Michigan

EDITORIAL NOTE.—What shall the doctor read? That is an important question at this season of the year, when the time is drawing near for the renewal of subscriptions and the procuring of literature for help in the winter's campaign. Dr. Rose can help you answer it.

WHAT a man shall put into his brain is a matter of almost as much importance as is the question of what he shall put into his stomach; and the resemblance between physical and mental food extends to their respective metabolism also. Like the physical, the mental food is a storehouse of potential energy, to be converted by internal forces into kinetic energy or work and into heat or enthusiasm. It is as true (and as trite) mentally as physically that it is not what we eat but what is assimilated and absorbed and built into the fiber of our being that is of value.

Like the dairy cow, we do better on a somewhat bulky diet than on concentrates. Examples of the latter may be found in books of ready-made formulas and prescriptions still published by many very good houses (and presumably are read), and also in quiz compends. The former are useless to the experienced physician and of extremely doubtful value to the tyro.

A quiz compend, dietetically considered, consists of a number of dried and condensed morsels, which the student is expected to store away, after partial mastication, very much in the same way as some animals store food in a pouch.

On examination day, these original packages are regurgitated and handed back to the quizmaster or state-board examiners, with their verbal wrappings intact and contents unchanged by their brief stay in the esophageal diverticulum. This insures a high rating, especially if the candidate is careful to see that no stray bolus has gone too far and gotten into his system—a rare accident, though, indeed. This method of feeding and "pouching," it may be observed, is the accepted one in our public schools. "Well, isn't it a blessed good thing that little Tommy can swallow all that stuff without its hurting him? Never really gets into his system at all, doctor, did you say? My goodness! What wonderful discoveries you medical men are making every day!"

Different Kinds of Medical Periodicals

Some doctors read books, but probably all doctors read medical journals. And thereby hangs a tale; for there are supposed to be two classes of these journals, namely, the so-called "practical" and the socalled "scientific," each class with its partisans at war with those of the other class.

The everyday doctor sometimes complains that the scientific journal contains little that he can utilize, while its ardent advocate regards the practical magazine with supercilious or good-natured (sometimes ill-natured) contempt. He will, if he can find it, point to an article on "How I Treat Bellyache," by Doc Sifers of Waydown, Arkansas, or "How I Cure Fits", by Dr. E. Normas Winbag of the Missouri bottom lands.

His opponent gleefully counters by "Exhibit No. 2," a six-page paper in the hyper-scientific periodical, "On a New Method of Staining for Bilharzia Asiatica", by Prof. Megalo Cephalii, M. D., Ph. D., LL. D., A. S. S., and also to exhibit No. 3, "The Cultivability of Amœba Dysenteriæ on Hay."

The scientific man thinks his exhibits demonstrate the inherent worthlessness of the whole tribe of practical journals, while the practical man maintains that bilharziosis is not a burning issue just now in Vermont or in Nebraska, and that the use of hay for the purpose indicated is of interest mainly to the agriculturist and therefore the article properly belongs in one of the Orange Judd publications.

This is not the first war of words over a matter of words that ever has occurred, nor probably the last that will occur. In the middle ages opposing mobs armed with clubs and bludgeons used to roam the streets of European cities, maiming and slaughtering each other over a difference of opinion as to which of certain two Greek words should be accepted as authoritative in the New Testament.

Our own foes—the foes of our profession—are too numerous and powerful for us to waste our time and weaken our defenses by attacking each other either with the bludgeon of coarse abuse or the Damascus blade of satire. Epigram is the temptation of the witty, epithet the argument of the fool, and sarcasm, while it may make the thoughtless to smile, can not but make the judicious to grieve. Let us try to conduct our discussions without either blustering belligerency or supercilious cynicism!

We shall find that, as a matter of fact, the "scientific" journal contains very much, indeed, of practical value, while the "practical" journals of the best class are constantly increasing and improving their output of scientific material.

The practical journal needs no apology and has abundantly demonstrated its value. To most of us general practitioners our problems are concrete and, while they are not to be solved by rule of thumb, still their solution is greatly aided by their free discussion with our confrères in the pages of our practical magazines, much as it is when discussed in a meeting of our fellow practitioners of the county society. Moreover, as long as the teaching of therapeutics is at its present admittedly low ebb in our colleges, earnest and alert men will enthusiastically welcome and loyally support a periodical which, like CLINICAL MEDICINE, extols and makes prominent this branch of our art.

Certainly, then, we shall subscribe for one or two or more journals of this type without apology and undismayed by the cynical smiles of those intellectual Brahmins who—hum—didn't someone say something about epithets a few paragraphs back there?

That is not quite all we shall do if we are wise and alert and progressive, for we shall also subscribe for one or two or more of the leading scientific journals, also without apologies, but with reasons, as in the other case.

First, because they are, mainly, the organs through which the leading men of the profession, the great specialists and research-workers give the results of their work to the medical public.

Often so great is the interest, both in the profession and out of it, in their work that a paper (or several papers) detailing the work so far done is published even though that work has not yet by any means resulted in a solution of the problem under consideration. Such papers, for example, as those of Dr. Simon Flexner, of the Rockefeller Institute, on the work done on anterior poliomyelitis. This is history in the making, in the same way as is, although in quite another field, contemporary politics.

Have we no interest in these tamers of the wilderness of ignorance? Then we are less alive than many of our friends and acquaintances of the laity. Popular magazines publish illustrated articles on the work of Flexner, Noguchi, Ehrlich, and Mme. Curie. We, the doctors, must be a little ahead of the laity! Certainly we need the scientific journal, with its bulletins from the field, its broad and comprehensive outlook on the great world of medicine, as we also need the earnest, clean, helpful, optimistic practical journal with its wealth of suggestions and aids for our actual everyday problems.

For us the two classes are complementary, however uncomplimentary their respective editors may at times become toward each other!

As to the Books for the Shelf

The question of medical books is of at least equal importance with that of journals and probably of much more importance. Dr. Hugh T. Patrick, in an article on the same subject as this one, published in *The Journal of the American Medical Association* a few years ago, discusses the question of books in a masterly manner and I should like to ac-

knowledge here the great help and inspiration his paper has been to me. Shall the doctor buy textbooks? This question the professor answers in the negative. "A textbook-man," says he, "never becomes a first-class man in the profession." This I believe to be true, but will later give reasons why, in my opinion, the general practitioner should buy and read some textbooks.

First in point of value Dr. Patrick would place the monograph, the one-volume work on a single subject by an author whose work and researches in the field chosen entitles him to speak with authority. Examples of such books will readily occur to the reader, Ehrlich's new volume being one. Next he would place what is practically the same thing, namely, a "system" of medicine or of surgery consisting essentially of a series of monographs bound together into a number of volumes. Osler's "Modern Medicine" and the five-volume system on surgery by Keen are good examples. The former I have found a source of pleasure and of the joy of clear thinking. Chittenden's chapter on nutrition clears up a lot of fog, as does Cabot's fine monograph on the blood.

When, however, it comes to saying that the doctor, the everyday doctor and all-around practitioner, should not buy textbooks and read them, I can not agree. True, a textbook in which the author confines himself to subjects of which he has personal knowledge and experience would be a welcome rarity. Ochsner seems to have done it with his one-volume surgery, but I do not think he claims it to be a textbook.

True it is also that a textbook treats of so many subjects that it can not treat fully of any one and is apt to be lacking in just those points of detail for which it is consulted. For all these objections, owing to the fact that the work of the general practitioner covers so wide a range, some of his reading must be of the textbook kind. He may do very little surgery, for example, but, yet, he must read some surgery and must be able to think surgically.

While he may not develop that "surgical sense" which comes only of long operative experience, yet he must have some surgical sense, else ghastly blunders are almost certain to dog his footsteps.

Appendicitis, typhoid perforation, empyema, ectopic gestation, glaucoma, all these surgical diseases come first to the general practitioner, and with a fairly large practice he is bound sooner or later to meet them all. He must be forearmed by a knowledge of their diagnostic phenomena and must, therefore, at least occasionally read surgery, gynecology, and ophthalmology, and, since he cannot be a specialist in everything and life is short, he can best get this knowledge from good textbooks.

> "If a man could be sure
> That his life would endure
> For the space of a thousand long years,"

he might be able to read only "systems" on all subjects. There are also special books on special subjects. Bier's work on hyperemia has had a great sale and is of value.

Finally, every physician should have "The Practice of Medicine," by Drs. Waugh and Abbott; also their "Text-Book of Alkaloidal Theraputics;" and a full list of works dealing with this branch of therapy—Candler, Redfield and Gray among them. These I have come to regard as indispensable to best practical work in the field. Such books make clearer thinkers and better physicians, though of course to the making of either much goes besides reading, important though that may be. To recapitulate:

1. Read one or more good "practical" journals—the more scientific the better.
2. Read one or more good "scientific" journals—the more practical the better.
3. Buy one of the best "systems." One on medicine, in any event; and one also on surgery, if you practise the art. Read by topic and not by course.
4. Buy good textbooks on the special subjects. Renew every five years.
5. When by wide reading and extensive observation in practice you have established a fairly extensive watershed, then drill down through the crust of your own diffidence, inertia or selfishness and let your artesian well fructify the parched fields of your medical society and make glad the pages of your medical journal.

The Use of Radioactive Waters

With Special Reference to Those at Hot Springs

By ESTILL D. HOLLAND, M. D., Hot Springs, Arkansas

THE trend of modern medicine is to assist the body to overcome disease, rather than to try to overcome it by medication.

Physiology, bacteriology, and pathology, all show us that the individual is well equipped with a natural pharmacopeia perfectly capable of coping with and overcoming the majority of diseases, and a physician's object should be to assist the body in gathering and concentrating its defensive equipment at the point of attack.

Vaccine and serum therapy, Bier's hyperemia, and hydrotherapy are our most serviceable and rational means in assisting, concentrating, increasing and directing these natural defenses both against functional and infectious diseases.

Vaccine and serum therapy are of recent origin and are the result of the study of bacteriology, physiology, and pathology. Bier's hyperemia is the revival, explanation, and scientific management of an ancient custom the significance of which has been overlooked for years. But hydrotherapy is a treatment that dates back to the time of Hippocrates and has been employed by some of the most eminent physicians of every period.

One would naturally infer from the foregoing that hydrotherapy is an exhausted and digested subject. It is just the opposite, as it seems to have been, and to be now, overlooked and slighted by the majority of physicians: and this is easily accounted for by the attendant expense and inconvenience of this treatment under ordinary conditions.

The therapeutic use of water takes time, and people who are at home and in business, even if they can, will not take sufficient time for the best results, so that a hydrotherapeutic health resort is a necessity if the best results are to be obtained.

The results from hydrotherapy are both thermal and mechanical, and its actions are not limited to the superficial structures, but every organ in the body can be influenced, either directly or indirectly, in this way, thus giving us a field of action without limit.

The more crude results are generally understood by the laity, and a great many people resort to baths of different kinds, realizing that they are almost immediately benefited.

The English believe in their cold plunge in the morning, and a great many people who, for various reasons, have passed a sleepless or restless night resort to a cold bath on rising, knowing that it will invigorate, recuperate, and rest them. People take hot foot-baths for a headache, apply hot-water-bags for pains of different kinds, use cold-packs on their heads, and in fact have learned to depend on hydrotherapy in a great many conditions. It remains for the physician (and by physician I mean one who at least knows the fundamentals of the different branches of medical sciences and is capable of interpreting them with regard to the individual) to explain these results so that the less obvious effects may be utilized.

Hydrotherapy, like every other remedial procedure, has its limitations and contra-indications, so that its use in a certain way as a national or clannish characteristic is bound to be detrimental to some individuals, whether sick or not.

Hot Springs, Arkansas, has suffered from the hydrotherapeutic nihilism of a great many physicians, and it has to a certain extent suffered deservedly. For, while we have the natural radioactive hot water, they have been used indiscriminately in a great many instances, and the resort has gotten the credit of failing, where failure was the only thing to be expected, either from the condition of the patient or from the method of bathing, or both.

Seventy percent of the people who visit this place now and take the baths do not consult a doctor and take a routine treatment, no matter what condition they happen to be in.

The United States Government has recently inaugurated a policy that, by its free distribution of bathing permits, without *any examination*, implies that this water will cure anything, no matter how it is taken. This, of course, is ridiculous. But when the Government issues bath permits to practically all who wish them, and gives the same bath to a rheumatic as it does to a nephritic, people naturally infer that hydrotherapy is a joke, and when they fail to improve as rapidly as they should, hydrotherapy as a whole is condemned.

We have been handicapped here by poor bathing facilities, a great many very inferior doctors, and a very poor government administration; and it makes no difference which of these things is responsible, Hot Springs gets the credit for the consequent failures.

Hydrotherapy is a science, and is not the hit or miss shotgun treatment that it is supposed to be by some. The action of water has been investigated and the results demonstrated, until its action is, and for a great many centuries has been, understood. Our knowledge is constantly increasing on the subject; but the general practitioner, not having the opportunity to use hydrotherapy, is not keeping up with this important branch of medicine as he is with the branches with which he is more familiar.

When we speak of radioactivity, we have to speak in rather general terms, as our knowledge of this wonderful substance is new and imperfect. However, we do know that radium represents the infinite in energy, as we understand it, and is capable of wonderful things.

When we reason that life is energy, and that radium is the personification of energy, we can easily see how energy and life may be related, and a great many scientists are inclined to think that they are close cousins.

As practising physicians, we are not so much interested in the theories of this substance as in its effects, and our best observations and demonstrations of its effects are the easiest and most common ones, as observing the action of radium or radioactive substances on individuals.

As I have mentioned, physicians, except a very limited number, are apt to deride the effects of different waters, either not believing in any water, or else thinking that all waters will act the same way if administered alike.

It remained for the laity to correct this error and to realize that some waters were better than others, and that some methods of administration were more beneficial. The different health resorts of Europe and this country could never have reached their present importance if they had depended on the physicians to recommend them. It has always been the people, after having profited by certain waters, who have advertised them to their friends. A great many physicians believe that their patients would do as well at home as they would at any spring or resort, if they would take the home water the same way and lead the same life that they do at these resorts; and I think myself that some of them would.

It is hard to argue a thing when one can not give a definite reason, and the beneficial effects of some waters have been no exception to this rule. We, as doctors, have looked for a reason, while the laity has been satisfied by the results, neither thinking nor caring about the reason. Consequently, the laity has been satisfied since time immemorial that certain waters were good, because the results were satisfactory, while doctors have tried to disprove these beneficial results, because their limited knowledge could find no tangible reason for such.

The people having called our attention to different waters and having impressed us with their faith, we find that there are certain waters that people go to for certain things; and, as the analyses of these best-known waters are being made anew, we are attracted by the fact that they are universally radioactive. Thus, Bath, Carlsbad, and Hot Springs (Arkansas), three of the best-known health resorts, have radioactive waters. We do not yet know the possibilities of radium, but the *people* do know the possibilities of these waters and depend on them to overcome certain conditions.

So, in the absence of any other reason, we are compelled to give the radioactivity the credit for cures which the people do not get from ordinary water. It may be radium or it may be some other substance (or substances) yet undiscovered which is responsible for the benefits derived, but it seems that, if radioactivity, if not the beneficial property, at least is an indicator that the real beneficial property is present.

The Indians came to Hot Springs (Arkansas), to treat themselves, before America was discovered. They did not know the reason for their improvement, and cared not, but their faith was constantly increased through the actual beneficial results obtained.

Because we can not understand a thing is no reason for our denying its existence, and this is just what the medical profession, from whom we expect the most in therapeutic adjuncts, has done.

Hot Springs (Arkansas) is an open-air clinic and a mammoth demonstration of the value of certain waters for certain diseases, and the fact that the patients are under no restraint when stating their conditions and improvements to fellow patients at the bath-house, hotels, and other public places makes the veracity of their statements as nearly unimpeachable as it is possible to have them. When a patient has been brought here on a stretcher, after having been treated at home

or at other resorts for variable periods, and is able to walk in a few weeks, he is a perfect demonstration of the power of hydrotherapy, and one that all the theories or dogmas of the medical profession can not extirpate.

Such instances happen here all the time, as any visitor will attest; and there is no way to account for them except by the water, and its scientific administration.

A great many of these people have been to other resorts before coming here, their hygiene at the former resorts being the same as here, yet they did not improve. Some patients are discouraged, when first consulting a doctor, to find that they are to do just about as they had been advised to do, and had done, in the past. And, in fact, it would be hard to give a great many of our patients a new treatment without writing a new pharmacopeia, as they seem to have taken everything named in our present one at least once.

For several years I have observed the effects of the baths here, on different patients, with instruments of precision of different kinds, and have found that my results correspond in general to the results obtained elsewhere with ordinary water. The space is too limited to go into details, but I might mention that metabolism is increased, the blood pressure regulated, either up or down, the amount of blood in a certain area or organ can be adjusted, but elimination is increased past the possibilities of ordinary water.

For instance, in the administration of potassium iodide, a patient who cannot take more than thirty grains a day away from here, will sometimes have no difficulty in taking three hundred grains a day while here. In fact, 180 grains a day is about the average dose that patients tolerate without any disagreeable symptoms. I had the pleasure of proving, in conjunction with Professor Ulmann, of Lehigh University, last year, that, although these patients can tolerate such enormous quantities of the iodides while taking the baths, never more than thirty grains of it is eliminated a day by the kidneys; consequently, it must be eliminated through the bowels, the skin, and the lungs.

One must remember that while the patient is taking potassium iodide he is not allowed to take the sweat baths, neither the hot-room or vapor, and, while there is a certain amount of perspiration incidental to any Hot Springs bath, these patients try not to sweat.

This, in conjunction with the daily manifestations I see of people's improvement, makes it perfectly clear to me that there is a general rejuvenation and acceleration of the whole system, both metabolic and chemical, which assists the body in eliminating its own waste, and its chemical, animal, and vegetable toxins.

Hot Springs (Arkansas) does not cure all the people who take baths here, and never will; but there are some diseases that it will cure and a great many in which it will help if the patients are treated properly while they are bathing.

We have been fortunate in having some elegant bath-houses erected in the last year, and our hydrotherapeutic facilities are now unexcelled anywhere, so that we can give the proper baths for any condition that is subject to such benefits.

No one should take a course of baths anywhere for their therapeutic effect without a thorough examination, including blood pressure, condition of the blood, and a complete urine analysis; but it is doubly important here because our baths are absolutely contraindicated by certain conditions, and it is not only valueless but dangerous for such people to take them.

We also have cold springs that are unsurpassed for purity, also elegant spring-houses where every inducement is offered the patients to drink.

I would like to say, in conclusion, that there have been several hundred cases of syphilis treated here with "606" in the last year, I have given it in more than three hundred, and there has not been a single undesirable effect from any of the administrations where a competent doctor has given it.

I think that this is partly due to the rapid elimination of the toxins of the dead germs and the "606," due to our hydrotherapy, which we use in every instance, both before and after the injection. I draw this conclusion from having seen a great many people who have been more or less injured by "606" in the hands of competent physicians away from here.

The Male Uterus*

The Prostate Gland, with Talks About Its Diseases and Their Treatment

By B. B. GROVER, M. D., Colorado Springs, Colorado
President of the El Paso County Medical Society

EDITORIAL NOTE.—This fine paper was read by Dr. Grover at a meeting of the El Paso County Medical Society. Before cases of hypertrophied prostate are turned over to the surgeon, the method of treatment which he advocates is worthy of consideration, in connection with the internal and local medication which has been proven of value.

IN the male, the gland that is situated posterior to the symphysis pubis, surrounding the neck of the bladder and constituting the beginning of the urethra, is the analog of the uterus in the female. This analogy obtains as to location, structure, function, and also the diseases to which it is subject. The symptomatology of acute and chronic prostatitis and of acute and chronic metritis are in many respects the same. Also both are prone to hypertrophy, hyperplasia, fibroma, carcinoma, and to the same infection, and, from an electrotherapeutic standpoint, more or less are amenable to the same treatment.

This sexual organ is the cause of as much trouble to the male as is the uterus to the female, except that the diseases of the uterus are more common during the active sexual period, while those of the prostate gland are more common in advanced life.

It seems unnecessary to go into the physiology and pathology of the prostate gland, except to mention that a certain degree of advancement in our knowledge in this direction has been made during recent years. Thus, for instance, we have learned that neurasthenia is not the cause of spermatorrhea and impotence, but rather that prostatic derangement brings on sexual neurasthenia.

Every case of prostatic disease is accompanied by more or less nervous disturbance, depending upon the pathologic condition present. The seminal vesicles act as a reservoir for natural secretions, and the latter are discharged through the prostate gland; and upon the condition of that gland depends the physiologic action of that discharge. Whether the seminal ducts are controlled by a real sphincter or by the muscular fibers of the gland surrounding them is immaterial. Certain it is that the condition of this organ is responsible for a large share of the sexual disturbances in man.

*Read before the El Paso County Medical Society, October 11, 1911.

Our profession has manifested but little sympathy for the sexual neurasthenic: he is given a placebo, also some harsh talk about excesses, and dismissed. It is not strange that he goes to the quack, for he is at least promised something.

Etiology of Senile Prostatic Hypertrophy

There is little to be said about the etiology of senile prostatic hypertrophy.

As to occupation being a factor, there are about the same number afflicted among those engaged in active indoor, active outdoor, and in sedentary pursuits. As to temperament, there is no perceptible difference in the frequency of occurrence in the phlegmatic, nervous, lean or obese.

It has been thought that overindulgence during active sexual life is a great factor in the development of this disorder, but it seems to me that this can be eliminated, since the condition occurs in men who have lead temperate lives in this regard as much as in those who have led lascivious lives. To my mind, the best evidence against this being a factor is the fact that hypertrophy of the prostate gland is exceedingly rare among the negro race.

My own observations warrant the statement that constipation and alcohol are important factors in the causation of this malady.

In this connection, I will also state that it has been my observation that at least 90 percent of all diseases of the prostate gland occurring in men under fifty years of age are caused by the gonococcus, and these are complicated by urethral stricture.

Removal of the Organ Often Unjustifiable

More than 1700 women were unsexed in the New York hospitals, alone, during the year 1910. If an eye offend thee, pluck it out—a scriptural injunction that many a surgeon has sustained, obeyed, and made applicable to almost every organ of the human body and

especially to the sexual organs of woman. They have, indeed, attacked the male uterus, but not with such avidity. It requires more skill to perform a successful prostatectomy than an oophorectomy or hysterectomy.

From a surgical standpoint, the operation upon a woman, if she survives a hysterectomy or oophorectomy, is a success. But do we stop to take stock of the result of the operation upon that woman's future happiness or usefulness to herself, her family, and the world? Do we count the cost to the man who is so unfortunate as to be deprived of his prostate gland? The surgeon who performed the first castration for prostatic hypertrophy should have been his own patient.

If these operations were performed when all other means had failed, then, in my opinion, the surgeon would have a higher standing in the community in which he lives and treasure more jewels in his crown in the great beyond. A surgeon is proud of his ability to perform oophorectomies, hysterectomies, and prostatectomies; but does it not require a greater degree of skill to restore an organ to its normal state than to extirpate the same? Every state in the Union has a statute that defines as a criminal act the interference with conception in any manner whatsoever, but is as mute as a clam upon the destruction of those organs that make conception possible.

Do not understand me to be opposed to these operations, for, in many instances, it is the only procedure; but let us give these unfortunates a chance when we have measures at hand that will keep them off the operating table and restore their usefulness to themselves and society.

Through all the centuries, since prehistoric times, man has been afflicted with diseases of the prostate gland—that sixty percent of all men who have attained the age of sixty years possess a diseased prostate gland is a conservative statement.

Not a textbook upon the practice of medicine has been written during the past one hundred years that has even suggested a therapeutic measure superior to that advised by Hippocrates, that acute observer who died hundreds of years before the Christian era.

Nonsurgical Management of Prostatic Disease

It is not the purpose of this paper to make an attempt at a scientific discussion of the subject, but rather to draw the reader's attention to a line of treatment that has proven successful in the management of a number of cases of prostatic disease of the kind that have been neglected for the absolute want of a therapeutic measure, outside of surgical procedure, that would give the patient any more than mere temporary relief.

It is well known among electrologists that the static-wave current relieves local hyperemia and congestion, consequently also tenderness and pain. It causes relaxation of muscular spasm, accelerates repair by increase of metabolism, increases glandular activity, and promotes absorption. The static-wave current, by its pulsatory movement, drains engorged tissue and expresses the infiltrate of a hardened mass. It increases phagocytosis, thereby relieving infectious inflammations. No other agent is so active in restoring the functions of faulty metabolism.

By our familiarity with these effects, it is most natural that we should administer this current in nearly all the diseases of the prostate gland. We should not advise its use in calculus or in carcinoma.

Caution and patience are required to handle these cases successfully. No method will invariably cure, because of the many complications; in incurable cases, however, it will afford great relief.

Method of Employing the Static-Wave Current

The technic of employing the agent is as follows: Place the patient on an insulated platform, after inserting in the rectum, and resting against the prostate gland, an L-shaped electrode. The patient is seated, preferably, on a hard-bottom chair, the stem of the electrode resting on the chair-bottom assisting in holding the electrode against the gland. Connect this electrode with the positive prime conductor of the static machine, the negative being grounded to a steam-, gas- or water-pipe.

Start the machine, with the ends of the discharging rods close together, with the Leyden jars in the circuit. Connected in this manner, the true static, or Morton, wave current will be administered to the gland. Steadily widen the spark-gap until the point of comfortable tolerance is reached. It will be found, in a short time, that the patient will tolerate a further separation of the discharging rods. The best work will be done with a spark-gap of eight to twelve inches, with a current-rate of sixty pulsations per minute; but this point must be approached cautiously and within tolerance.

If urethral stricture exists as a complication, this should be treated by electrolysis. Cys-

titis, if present, should be treated by bladder irrigations, *secundum artem*. In the latter cases, hexamethylentetramine is about the only drug of any importance to be administered, except the necessary ones for constipation, and they will not be needed after a few treatments.

The result of this method of treatment will be better understood by the history of the following cases, which were all referred to me by Colorado Springs physicians.

A Few Case Illustrations

Case 1. Mr. J. R., age 50, single. Contracted gonorrhea in the summer of 1907. Had the usual and some unusual treatment from that time on. He came to me in November, 1910. I found three urethral strictures, and a prostatic abscess almost filling the rectal pouch. The following day after the examination the abscess ruptured into the bladder and he passed forty ounces of pus during the following forty-eight hours. The pus was swarming with streptococci and gonococci.

The patient was put upon hexamethylentetramine, and his bladder was irrigated twice daily. The static-wave current was applied to his prostate gland every other day for twelve treatments, when the urine became normal, all discharge ceased, and he declared himself well, going to California to take charge of a ranch. The last I heard from him was in April, 1911, and he was then well.

Case 2. Mr. E., age 40, married. Contracted gonorrhea twenty years ago. Has had a discharge of mucopurulent character ever since. I found three urethral strictures, which dated from the attack of twenty years ago. The patient had his strictures divulsed many times. While a Van Buren sound was his constant companion, I also found a swollen and tender prostate gland, and it was infected with the gonococcus. It goes without saying that his wife has lost her uterus and adnexa. His stricture was treated with electrolysis, and the prostate gland by the static-wave current through the rectum and by cupric cataphoresis through the urethra. After five weeks all discharge ceased and he returned home.

Case 3. Mr. L., age 61, single. His trouble dates back seven years, when he began to be annoyed by dribbling urine and having to arise many times a night to void a small amount of urine. He soon became wedded to the catheter and has had few respites from its use. Four years ago, to complicate matters still further, he contracted gonorrhea and has been entertained by a drip and a shred ever since. I found his condition pitiful: anemic, very nervous, staggering gate, fainting upon the least provocation, intermittent chills followed by elevation of temperature, necessity to catheterize six times during the day and three times at night. The urine contained blood and pus. After the second treatment by the static-wave current he was free from the catheter until 5 a. m. After the eighth treatment the urine became clear and the catheter was used but once in three days. After the tenth treatment the catheter was abandoned for three weeks. At this time he had two ounces of residual urine. The prostate gland had been reduced from the size of a small orange to nearly normal. He gained twenty pounds and all symptoms ceased.

Case 4. Mr. W. F., age 23, married. Contracted gonorrhea eighteen months previously; morning drop still in evidence. About four months after he contracted the disease, symptoms of general infection manifested themselves in his lumbar spine, in one finger, and in one toe-joint. His case was diagnosed as rheumatism and he took a course of treatment at several hot springs (Hot Springs, Arkansas; Excelsior Springs, Missouri; Glenwood Springs, Colorado), was treated by many physicians in St. Louis, Omaha, Denver, but still his condition was the same. I found a swollen and inflamed prostate gland, and the urine full of shreds containing diplococci. Treatment: The static-wave current was applied to the gland every second day, and he received thirteen treatments, when he was discharged well, and has remained so.

Case 5. Mr. T. R., age 40, single, always healthy. Contracted his first gonorrhea in September, 1910. He was treated in the ordinary way for one month, when orchitis developed, for which vaccine was administered. The orchitic inflammation subsided in three days, but prostatitis and general infection followed, these affecting the lumbar spine and the joints of one finger and one toe. He was given ten static-wave treatments and seven treatments by cupric ionization through the urethra. Was discharged well, and has remained so for many months now.

Case 6. Mr. F. F., age 26, single. Contracted gonorrhea in the spring of 1907. Has had the proverbial drop every morning since. He was treated by many physicians and mistreated by others before coming to Colorado Springs. His habits were good, except for drinking a little beer. His pros-

tate gland was enormously enlarged and he suffered from frequent urination. He was cured by six treatments with the static-wave current.

Case 7. Mr. N. C., age 70, married, no venereal history. He was compelled to arise many times in the night for several years, became a catheter habitué in September, 1910. I saw him first in March, 1911. I found a prostate gland the size of a small orange. After the third treatment he abandoned the catheter. He took thirteen treatments within one month, and was discharged well.

Case 8. Mr. W. H., age 70. Has had many attacks of rheumatism. Has mitral insufficiency, arteriosclerosis, and staggering gait. The urine contained blood, pus, albumin, and casts. The prostate gland almost filled the rectal pouch and was sclerotic. He took twenty-two static-wave current treatments, but with only a slight reduction in the size of the gland. He experienced some relief from the nervous symptoms, but that was all.

Case 9. Mr. F. M., age 24, single, habits good. Contracted gonorrhea in January, 1909, and was busy with a drip and a shred until I saw him in November, 1910. I found an enlarged infected prostate gland. He received, in all, twelve static-wave treatments, and was discharged well.

Case 10. Mr. T. S., age 60, married. Eighteen years ago he received an injury to the prostate gland in riding a bucking broncho. Since that injury he has had to arise several times a night to void urine. About six weeks before I saw him he had an attack of acute prostatitis ingrafted upon his chronic one. After the eighth treatment he slept all night for the first time in eighteen years. He took sixteen treatments, and has had no further trouble.

Case 11. Mr. U. S., age 47, always well, with the exception of a few attacks of inflammatory rheumatism; a beer drinker. For a period of six months before seeing him he was unable to empty his bladder. On July 15 he had complete retention. The catheter dislodged fifty ounces of urine. On July 16 he was catheterized and the static wave was administered July 18. He had four ounces of residual urine. I found the prostate gland of the size of a large hen's egg. He took thirteen treatments, and has had no trouble since.

These cases are selected from the many treated, to show the different classes of prostatic disease and the results obtained by the static-wave treatment.

The Cleaning of Eating Utensils

By M. H. EVANS, M. D., Joplin, Missouri

THE subject named in the title is one of great importance to the life-insurance companies, from an ethical as well as business standpoint.

Much has been done, through publicity, to reduce the numbers of infections and the mortality caused by that all-pervading plague, tuberculosis.

In the United States there are 130 medical colleges with about 10,000 professors, clinical physicians, and instructors; there are several hundred medical societies, about 200,000 physicians, and hundreds of hospitals with their corps of nurses; and, yet, all these, aided by the great daily and medical press, have not materially reduced the mortality from tuberculosis, while syphilis is on the increase.

What is the reason for this lack of progress? The answer is, that the most hygienic precautionary measure for the prevention of the spread of tuberculosis has not been considered to any extent, and, so, infections continue as before.

Eating Utensils Never Are Properly Cleaned

The eating utensils, contaminated and infected as they are when used by an infected person, wherever it be, are never properly sterilized; being washed in warm water together with the same dishes used by the rest at the table. And this is the universal custom, and this irrational practice must be revolutionized if we wish to make any progress in the reduction of infection.

This harmful custom must be changed through the influence of the medical profession. The doctor "teacher" must teach sterilization in the home. It must be taught in medical colleges and public schools, and by physicians in the home, that it is just as necessary to sterilize eating utensils that are infected with disease germs as it is for a physician to sterilize his instruments.

Nine out of ten of the restaurants and eating houses have greasy dishes that are, not only filthy, but absolutely dangerous to human life; and, if it were not for the innate physiologic resistance, but very few of us would escape infection. As a matter of fact, nearly all people do get infected, and so epidemics of measles, of scarlet-fever and of diphtheria continue to flourish.

The Principal Time Tuberculosis Is Contracted

There are three periods when the chance of infection is greatest. The first belongs to childhood (under the age of seven), the time when the little ones as yet play on the floor and drink after other persons. The second period also affects childhood. The generation of little children have grown up, have married, and have children of their own. And these, again, will play on the floor, drink and eat after infected individuals, usually grandparents who have asthma of the tuberculous type or some other infection. The third period of infection belongs to childhood also. The children first mentioned are now grandparents. They go to the homes of their children, who in their turn are raising a family—with whom to live when aged. Thus the opportunity for becoming infected is in direct proportion to the numbers living in the family, and childhood and old age are the direct factors in spreading disease.

A number of years ago I found that whenever I had a patient afflicted with tuberculosis, in a very short time he would have what appeared to be a fever resembling malaria, with aching bones, possibly diarrhea or constipation, and that this in a few months developed into tuberculosis in some part of the body.

Cow's Milk Is Not the Chief Cause of Infection

While I recognize that milk may often be the medium of infection, I believe that the danger of infection is not nearly so great as some of the enthusiasts would have us believe. The danger of infection to the rest from some member of the family who is infected with tuberculosis, through the medium of the eating utensils, is many times greater.

Some two years ago a dairyman furnishing milk to me had the finest lot of Jersey cows I ever saw. In March, when they were calving, they reacted to tuberculin and were ordered slaughtered. Only one of the heard showed any serious and two but very slight infection. In this case, I think, the cows were made the scapegoat, that in reality they had become infected from the family, and that the slaughter was unnecessary; for some time before, a child had died of tuberculous meningitis.

Some Striking Illustrations

To contrast with this, and to show a more reasonable source of infection, let me recite the history of a young married woman.

This young woman had been married a year and had a baby a month old, and with the family lived a stepfather, an old soldier. The woman contracted pneumonia, which I diagnosed as tuberculous. The family denied any tuberculosis in the family and they fell out with me, as I insisted upon my diagnosis. She died six months later, twenty-four hours after arriving in Los Angeles, where my "intelligent" competitor sent her to recover from a "slight attack of bronchitis."

It has been six years since this occurred, and the aged stepfather has recently come to me for examination for an increase in pension, and he states under oath that he is suffering from tuberculosis of the lungs, with hemorrhages, contracted in 1863, during the Civil War, at Andersonville prison; and, further, that he has had, during the last forty-seven years, twenty-five hemorrhages, has coughed, had asthma and has expectorated all the time. Physical examination partly corroborated this statement. This is the same old man that had lived with his children and grandchildren, and infected them all. Don't you think I'd be a chump to go out and kill the family cow as a source of infection?

It is possible that the knives, forks, and spoons with which this tuberculous man has eaten during the last forty-seven years, washed merely in luke-warm water, have infected a body of men, women, and children larger than the regiment he enlisted in in the sixties.

I could repeat case after case, and family after family that have been infected in a similar manner, but it is unnecessary to take up time and space in repetition. Neither is it necessary to centrifugate the infected dish-water, place the mud under the microscope and isolate the bugs in order to prove that infection can take place from one to the other in eating-houses and private homes. Every up-to-date doctor knows there is danger in such unhygienic methods. I have learned a few things from my bugoscope.

All Doctors Conversant With Scientific Sterilization

We, as physicians, know that infection can, and will, take place under certain circum-

stances. The underlying principles of infection and cleanliness depend upon sterilization, and the physician unable to grasp the facts depending upon fixed principles, when once presented, certainly resides away back in the dense woods.

Every doctor who has seen the inside of a medical college knows that it takes five minutes of boiling to destroy the bacilli of tuberculosis. In all families the eating utensils of the patient are invariably placed in the dish-pan with those used by the rest of the family and washed with water at perhaps a temperature not above 100° F. What is to be expected, then, with such gross carelessness—yes, criminal carelessness when we know it—that the rest of the family will soon be infected? What doctor is there who would use his instruments with such makeshift cleaning? And we are the very ones who are first to claim the cow as the seat of infection, when it is the family that has infected the poor cow!

The Cow the Scapegoat for Ignorance

What do you think scientific men of the future will say of our method of applying common sense when one hundred years from now they read in our journals that the intelligent physicians of the twentieth century recommended open-air treatment for tuberculosis—a disease we knew killed from ten to twenty percent of our population, and we did not once insist upon thorough sterilization of all our eating utensils, while well knowing the malady to be terribly infectious and the mouths of the victims causing more deaths annually than war itself?

What do you think future generations will think of our intelligence, when we allow men to spit tuberculosis-germs up and down the street; allow them to leave these noxious agents on every knife, fork, and spoon they use, and in fact to feed the baby with the very same spoon they had in their own mouths; allow them to expectorate germs on the hay, so that the cow gets infected; and then, with scientific ostentation, get a law passed to have a horse doctor go out there and test that cow for tuberculosis, and make it the duty of a state board to kill that innocent cow as a source of infection? Such doings, verily, are a disgrace to the entire medical profession and to twentieth-century intelligence.

The veterinarian will tell the doctor that each cow must be kept in a separate stall with individual manger. We humans, however, all eat with the same knife and the same spoon, year after year, without once sterilizing them, irrespective of the fact that someone in the family may have tuberculous asthma.

The Infective Cup, Also the Astute Undertaker

More than one hundred years ago nearly every person in Montreal, Canada ("History of Medicine of Canada"), acquired syphilis by using the same cup or dipper to drink from at a well. Discontinuing the cups, the disease was controlled by the King's physicians. Kansas, Oklahoma, Wisconsin, and some other states have legally abolished the cups on the trains, but schools, hotels, and homes have not yet received proper attention, although far more in need of this reform.

Get your microscope busy and see whether I am not telling you the truth. Will not coming generations smile when they read how we let infected people convey their disease germs to their friends throughout all their lives, and how the moment they die the intelligent undertaker would discover what the doctor did not during the many years' sickness, namely, that the corpse was infectious and must be embalmed with formalin, wrapped in a sheet wet with carbolic acid, and be buried in a hermetically sealed metallic coffin, at one hundred dollars per?

Crematories Are All Right, But—

Crematories a necessity? Well, yes; but crematories are not modern. In ancient cities, a few thousand years ago, they had no garbage cans or sewer systems as we have now. On the outside of the city was kept burning a fire, called the "gehenna," where servants and slaves, and all others not so fortunate as to own slaves were required to deposit, daily, all the accumulated rubbish and garbage. Later religious writers, referring to what ought to be done and would be done with the people who did not comply with the standard mode of living and conduct, said they would be cast into "gehenna"—which has been translated as hell.

But, really, is it not a little too late, from a hygienic standpoint, to cast our human garbage into the junk-pile gehenna, to sterilize them? Is it not better to do a little sterilizing while the patient is alive? Is it not a day too late for us to receive any material benefit after the undertaker gets us?

The dishes in every family where there is infection should be washed in hot running water, then placed in a sterilizer over a fire and be steamed for five or ten minutes. The only reason why this is not done is that it is overlooked.

THERAPEUTIC NOTES

CARDIAC FAILURE IN DIPHTHERIA

Dr. E. F. Coghlan (*Brit. Med. Jour.*, Mar. 9, 1912) has had good results from the use of the following formula in cardiac failure in diphtheria: Atropine sulphate, gr. 1-100; strychnine hydrochloride, gr. 1-100; solution of adrenalin chloride, 1 : 1000, m. 5; water, m. 5. This dose to be administered hypodermically every four hours.

THE TREATMENT OF RINGWORM

Dr. A. W. Williams recommends the following formula for the treatment of extensive scalp ringworm (*British Journal of Dermatology*, through *The American Journal of Dermatology and Genito-Urinary Diseases*): Camphor, ozs. 4; alcohol, ozs. 4; picric acid, grs. 7. Label: Inflammable! To be painted all over the scalp twice daily.

CALCIUM CHLORIDE IN ASTHMA

C. Kayser (*Ther. Monatsh.*, March, 1912) advocates the use of calcium chloride in hayfever and in bronchial asthma. He observed a decided benefit in one typical case of hayfever and in 13 out of 15 cases of true bronchial asthma. The following formula is recommended: Calcium chloride, Gm. 20; simple syrup, Gm. 40; water, enough to make Gm. 100. Label: One tablespoonful in milk every two hours. To be renewed once.

THE ACTION OF SPARTEINE

George E. Pettey (*American Journal of Surgery*, July, 1912) says that sparteine sulphate lessens the frequency and increases the force of the heart action, but does not raise the blood pressure. It is a nonirritating, diuretic, and is free from objectionable effects.

SPARTEINE IN PNEUMONIA

George E. Pettey (*American Journal of Surgery*, July, 1912) says that for irregularity of heart action, especially in pneumonia, sparteine has no equal. It counteracts the overworked condition of the heart, pulmonary and venous congestion, and prevents heart exhaustion and carbon-dioxide poisoning, which usually cause the death in this disease.

ALKALIS TO PRECEDE LACTIC-ACID BACILLUS PREPARATIONS

Glaessner (*Wien. Med. Woch.*, 1912, No. 32) says that the lactic-acid bacilli which are given for therapeutic purposes in enterocolitis are often destroyed by the acid gastric juice. He recommends, therefore, to neutralize the gastric juice, or to administer the cultures (lactobacilline, galactenzyme) in agar-agar.

VACCINE TREATMENT OF PNEUMONIA

Frank Charteris (noted in *The Prescriber*, May, 1912) says that vaccine treatment was used in a series of 19 cases of pneumonia, brief clinical histories of which are given. The results were not very encouraging. The administration of a polyvalent stock-pneumococci vaccine did not appear to have any marked effect upon the subsequent course of the disease, nor did the early administration of vaccine abort the disease or prevent complications.

THE TREATMENT OF CATARRHAL ENTERITIS

In catarrhal affections of the small intestine, Karl Glaessner (*Wien. Med. Woch.*, No. 32) recommends, in addition to the proper diet, a preliminary purge, best by castor oil. If there is severe diarrhea, preparations of tannin are given, perhaps in combination with an antiseptic, such as salol. Glaessner has obtained excellent results from resorcin in combination with menthol. Animal charcoal also is valuable, because it absorbs the toxic ferments and the toxins and removes them from the bowel. Similar in action is white bole, which has recently been recommended highly.

In some cases of catarrh of the small intestine opium is indicated and cannot be omitted. Its favorable effect is due to the fact that it delays the emptying of the stom-

ach for hours. Bismuth preparations, which frequently are used, have the disadvantage that sometimes they prove poisonous. The author gives bismuth together with belladonna, as follows: Bismuth subnitrate, Gm. 7.5; calcium phosphate, Gm. 7.5; extract of belladonna, Gm. 0.25.

SPARTEINE IN DRUG-ADDICTION

George E. Pettey (*American Journal of Surgery*, July, 1912) has found sparteine invaluable in the treatment of narcotic drug-addiction. In the rapid as well as immediate withdrawal of the opiate, as he practises it, some reliable agent, one that can be depended upon for support of the heart, is essential. Digitalis, strychnine, and strophanthus are not to be compared with sparteine for meeting this crucial test.

CHROMIUM SULPHATE IN LEAD POISONING

According to *The St. Louis Medical Review* (Feb., 1912), R. Peter had under treatment a case of chronic lead poisoning, the patient being a printer, 35 years of age. Chromium sulphate was administered with very satisfactory results, the characteristic symptoms having much abated in four months. The drug, however, requires to be administered regularly, for any laxity in the treatment soon tells. The author fails to mention the doses employed.

THALLIUM ACETATE AS A DEPILATORY

R. Sabouraud (noted in *The Prescriber*, May, 1912) says that thallium acetate has been tried in medicine, but had to be abandoned because of its tendency to produce alopecia. The author takes advantage of this very property by using the salt as a depilatory. He prepares a salve containing about 8 grains of thallium acetate in 1 ounce of cold-cream containing some zinc oxide. A very small quantity applied to the lip each evening will cause rapid disappearance of downy growth.

SPARTEINE IN IRREGULAR HEART ACTION

George E. Pettey (*American Journal of Surgery*, July, 1912) says that sparteine is the most desirable remedy for correcting irregularities of the heart action. Its effect is prompt. After hypodermic administration its action may be noticed in fifteen minutes, being fully established within an hour. It has an effect on the stomach like that of a bitter tonic, with no tendency to cause nausea or other unpleasant symptoms.

IODINE A CARBOLIC-ACID ANTIDOTE

The American Practitioner for August, 1912, contains a review of several reports in which carbolic-acid poisoning was treated efficiently by the administration of tincture of iodine.

TREATMENT OF INFANTILE ICHTHYOSIS

The *Paris Médical* for February 10, 1912, recommends the following method in the treatment of infantile ichthyosis. The scaly covering of the skin is removed by a mixture of green soap, 1 part, with 3 to 5 parts of petrolatum. The following day the infant is bathed, from 10 to 30 Grams of sodium carbonate being added to the water.

After the skin has peeled, glycerite of starch may be applied, or this unguent: Petrolatum, Gm. 15; lanolin, Gm. 15; tartaric acid, Gm. 0.5 to Gm. 1. Mix. Or the following formula may also prove effective: Petrolatum, Gm. 20; pine tar, Gm. 0.5 to Gm. 1. Mix.

SPARTEINE PREVENTS POSTOPERATIVE SHOCK AND NAUSEA

George E. Pettey (*American Journal of Surgery*, July, 1912) says that in surgical cases sparteine is of great value for preventing shock and postanesthetic nausea. It has a power to sustain the action of the heart during anesthesia and reduces the shock greatly if it does not entirely prevent it. If shock is avoided, postanesthetic nausea rarely occurs, provided the intestinal canal has been properly emptied before the anesthetic is given.

When the intestinal canal has been thoroughly emptied and portal engorgement overcome, and the patient is well under the influence of sparteine at the time of operation, it is rare to have a variation of more than ten per minute in the pulse-rate during a prolonged operation. Shock is much reduced and nausea rarely occurs. This result cannot be expected in emergency work, where there is no time for cleansing the patient's system from toxic matter, neither can it be expected in cases where a saline cathartic alone is depended upon to empty

the intestinal canal; still, even in these cases sparteine contributes materially to the safety and comfort of the patient.

THE USE OF TARAXACUM IN CANCER

Dr. Herbert J. Robson relates, in a correspondence to *The British Medical Journal* for May 25, that for the last six months he has been giving taraxacum systematically in three cases of cancer, apparently with remarkably beneficial results.

In one patient with cancer of the bladder (woman 60 years old) teaspoonful doses of fluid extract of taraxacum three times daily in an ounce of water, eventually increased to two teaspoon doses, caused the patient to gain in weight and reduced the vesical irritation decidedly.

The other two cases are cancer of the bowels where attacks of severe subacute obstruction had occurred. In one case colotomy was advised and prepared for, but the patient and friends at the last moment refused to have the operation done. Both these patients are now having regular and normal stools; they have no feeling of obstruction—which before was constant—they have gained weight and are free from abdominal pain.

SUPRARENAL GLAND IN CARDIAC DYSPNEA AND DROPSY

J. C. Voigt (*British Medical Journal*, March 9, 1912) says that, aside from the established and customary drugs that are employed in dealing with failure of compensation in heart cases, suprarenal gland and its preparations can be relied upon in some instances. The solution of the extract of the gland may be administered hypodermically or by intravenous injection, or the gland substance may be given by the mouth in tablet form.

Dr. Voigt has treated with this drug several cardiac patients in whom dyspnea and dropsy were prominent symptoms. In all cases the dyspnea was relieved more or less, sometimes by the hypodermic injection of from 5 or 10 to 15 minims of 1 : 1000 adrenalin solution, at other times by a 5-grain tablet of the suprarenal gland substance administered by the mouth.

In the first case the urine increased during six days of suprarenal treatment from 26 ounces, to 37, 49, 51, 111, and up to 125 ounces. At a later period the urine had again become very scanty, measuring on one day only 18 ounces. Adrenalin was then given subcutaneously three times and continued during the following days, without diminishing the salt in the diet, with the result that the next day 20 ounces of urine was voided, and on the three following days, 43, 116, and 102 ounces, respectively.

In another case, in which the patient could not be brought to resign herself to the salt-free diet or to an excessive milk diet, ordinary diet was continued and two hypodermic injections of 7 to 10 minims each of adrenalin, 1 : 1000, were given daily. In this case the 24-hour amount of urine increased from 29 ounces, to 37, 49, 76, 74, and finally to 93 ounces.

After this, the amount of adrenalin was diminished and the treatment continued for a few days longer, with the result that all dropsical swelling disappeared. The albumin disappeared from the urine, which was secreted in large amounts.

DIRECT INTRODUCTION OF REMEDIAL AGENTS INTO THE DUODENUM

Lewis L. McArthur discusses, in *The New York Medical Journal* for January 27, 1912, his experience in utilizing therapeutically biliary tracts that had been opened for coincident disease.

This novel procedure was suggested some years ago by the observation that when flushing temporary biliary fistulas for lavage of the gall-bladder the irrigating fluid frequently failed to return. Thereupon the author made use of these fistulas for rapid hydration, systemic medication, feeding, and stimulation, and his gratifying results have since been duplicated by other observers.

An important indication for this method is present in chronic obstructive jaundice, frequently associated with nephritis, where, after ether anesthesia, complete anuria is apt to occur. Among other cases in which it was applied successfully were tuberculous affections of the intestine, ulcer of the stomach, and inoperable carcinomatosis of the stomach.

SPARTEINE AN IDEAL HEART TONIC

Sparteine is a true and reliable heart tonic, an excellent nonirritating diuretic, and is entirely free from objectionable side-effects. It lessens the frequency and at the same time increases the force of the heart action, but does not raise blood pressure. This is made possible by the fact that it is also a vasodilator, and by this phase of its action it dilates the arterial capillaries to such a degree

as to enable the arterial system to receive and accommodate the increased volume of blood propelled by the more vigorous action of the heart without increasing the arterial tension.

Sparteine, further, adds tone to the heart-muscle and so causes it to propel a larger volume of blood at each impulse, while by its vasodilator action it opens up the way for the passage of this increased volume of blood, thus increasing the propelling force and lessening resistance. This makes sparteine the ideal heart tonic, and, in the author's experience, it is the only remedy (single or combined) which meets this indication perfectly.—G. E. PETTEY, in *American Journal of Surgery*, July, 1912, p. 261.

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[Another citation from Dr. Pettey's interesting article, together with an editorial comment, will be found in the Miscellaneous Department of the present issue.—ED.]

SODIUM BICARBONATE FOR BURNS

Dr. Curt von Wedel (*U. S. Medical Journal*, July, 1912) paints a vivid picture of the typical case of severe burns coming to the hospital. The patient shows a good pulse, being stimulated by the pain, he gradually becomes stupid, pulse grows rapid, then acid vomiting, diarrhea and suppression of urine appear. The latter shows hyperacidity and contains diactic acid. The stupor is soon followed by coma ending in death; all this within twenty-four to forty-eight hours, and too early for the development of sepsis and too late for shock, to explain these rapid developments.

Dr. von Wedel finds an explanation in acidosis, tests showing that the vomitus, stools, urine, and other excretions are charged with diacetic acid and various other organic acids.

It is a well-known fact that the surface reaction of all burns is acid—that is why our grandmothers applied baking soda: the saleratus alleviated the pain by neutralizing the acids forming.

Burns immediately after the occurrence are all sterile or nearly so, becoming infected only as a secondary condition. Therefore, the indicated treatment is to prevent infection, to prevent absorption, and to alleviate pain.

Bicarbonate of sodium is a mild antiseptic and an astringent and, because of its alkaline properties, is an anesthetic to burns. Consequently this substance answers all the indicated requirements, and is thus equally as efficient as the much-used boric acid, mercury bichloride, and other antiseptics. The paramount indication for its use, however, is that it renders alkaline the burned area, thus alleviating pain and preventing the absorption, by its neutralizing action, of this intensely acid toxin, the absorption of which often ends so disastrously to our patients.

Sodium bicarbonate should be applied in a rather thin paste and be renewed twice daily by saturating gauze with it, being very careful to employ a strictly sterile solution. The gauze should be covered with gutta-percha tissue, both to seal the burn and to keep the patient's bed dry. Then the patient should receive, per enema, 6 ounces of a hot 6-percent solution of sodium bicarbonate, repeating every three hours for as long as he can retain the same.

If the burn should not be so severe, large quantities of sodium bicarbonate should be given by mouth. If it be severe, however, a hypodermoclysis or an intravenous infusion of one quart of isotonic sodium-bicarbonate solution should be given. This infusion not alone acts as a stimulus to the patient, but directly neutralizes any acid toxin that may have been absorbed, thus immediately preventing the congestion of the serous and mucous surfaces. It also acts as a diaphoretic and diuretic.

By its diaphoretic action, produced by increased blood pressure, the soda infusion eliminates an alkaline serum about the burned area, thus greatly diminishing pain. By its diuretic action, we eliminate one of the greatest dangers in our customary treatment of burns: namely, the use of very large doses of morphine, whose only action is greatly to prevent elimination and to add to the dangers of suppression. Again, by this diuretic action, produced both by its neutralization of the toxin in the kidney and by its increase of blood pressure, it relieves the body of the overwhelming toxemia and prevents that most dreaded complication, the suppression of elimination.

Sodium bicarbonate also tends greatly to relieve the congested lungs, bronchi, intestinal mucous membrane, and meninges, by rendering alkaline the secretions. By its rendering alkaline the secretion of the meninges, we prevent irritation of this delicate membrane, which, when irritated, causes an exudate of serum, added brain pressure, and coma.

GLEANINGS from FOREIGN FIELDS

TRANSLATED BY E. M. EPSTEIN, M. D.

Tuberculosis and Pregnancy

PREGNANCY subjects the female to fatigue, favors the development of tuberculosis, spurs on the disease which evolves now under the deceptive mask of apparent health. The pregnant tuberculous woman looks like a cured patient. There seems to be a kind of arrest in her pulmonary lesions, but, although deceptive for a while, it will end in galloping consumption. Unfortunate woman she on whom delivery will make such a terrible reprisal!

Provident families or simply prudent ones consult us at times to find out our opinion as to the proposed marriage of a child of theirs. In this connection let me relate an incident which touches me personally very closely and which has not lost in value after many years.

A young physician sees a patient of his who is under treatment for more than a year for a doubtful case of tuberculosis. The patient had that day the cheerful air of a man who expects something good to be about to happen to him. And, true indeed, on examining him the physician finds his patient very much improved and does not hesitate to express to his patient his satisfaction at the state of things. "Do you think, doctor, that I could get married?" The doctor was in a quandary. To tell this fine young man all that he thought about the case would be the same as giving him a death-blow, and to let him carry out his fond design would make him, himself, a *particeps criminis*. So he tried to gain time and asked for a two-year longer treatment before he could give his consent. The patient went away very sad, and never returned.

Ten years later the changes and chances of life brought these two men together. The former phthisical patient was married—had married the next day after he saw the physician. He seemed perfectly cured. His children looked splendid. According to this former patient, he never had had any chest disease and the physician had grossly mistaken the case. Yes, to be sure, he had been mistaken, not alone in the diagnosis, but in the prognosis as well.

Along with this happy case, the physician met during the last ten years with many other cases which justified the thought that he was mistaken then. Henceforth he was more tolerant, less pessimistic, and became convinced that the future of a phthisical case depends less on the patient than on the disease. He had gathered a few more gray hairs on top of his head, and considerably less illusions inside of it. He distrusted the pitiless formula followed at the beginning of his practice and now pondered over every case in particular, giving his advice well supported, and let the parties interested draw conclusions as best they could; and thus the most irreconcilable one became the most conciliatory opportunist.

In contrast to the above particular case I think it logical to give the following three experiences:

Case 1. A man 24 years old, with no lesion or bad antecedents, married a young girl 20 years of age who had been treated for tuberculosis and was cured. Of this union five girls were born, all of whom died between their twentieth and twenty-third years of age.

Case 2. Mr. X. married a girl 21 years of age whose parents died of tuberculosis. Mrs. X. had three pregnancies, and before the third she became sick and died of tuberculosis in less than five months.

Case 3. Madame D. was tuberculous. She gave birth to two children, both of whom died, one of bacillary enteritis at 18 months of age, the other of meningitis at 26 months. After a third pregnancy she gave birth to a well-constitutioned child, which succumbed two months after to symptoms of postgripal galloping consumption. The child presented no morbid lesion.

A great number of elements must be considered as causative ones before we formulate an opinion or modify it; for, though there are general rules in medicine, they do not go beyond the one of particularizing each case by itself. This is the reason for the disagreement between the partisans of heredity and those of contagion.

Physicians have at all times noticed the cruel part which phthisis plays in certain families, and from this to the idea of heredity is but a step, and that step was readily taken. But when they desired to fix the rules of this heredity they ran against results the most incoherent. According to some there are five hereditary in every six phthisical cases, while, according to others, there is at most one in seven; and certain modern physicians there are who even doubt the reality of any hereditary influence.

And, in fact, when we study the physiognomy of a family affected with tuberculosis, we find it so variable that heredity recedes to a place of secondary importance. The pictures which Laudet draws are very important in this respect. They prove that heredity is possible and even probable, but that it is of less influence than one would be inclined to believe. Thus a phthisical father and mother may have a child who is vigorous for a long time, but at the age of fifteen, twenty or thirty years old he becomes tuberculous. If we were able to be satisfied that on coming into the world the child carried the germs of the evil, we might in strict reasoning admit that the germs were dormant for that long period, but there are no proofs that could satisfy us, in spite of all the researches made in this respect.

Edward Squire compares the frequency of phthisis in the issues of children born of tuberculous parents and of those issued from healthy parents. In a former work Squire expressed the opinion that tuberculosis was not hereditary. Instead of pursuing his historical researches ascendantly, he pursued them descendantly, and ascertained how many children of tuberculous parents became tuberculous themselves and how many remained well. The results show that 33.71 percent—that is, one-third of the whole—became tuberculous. The results were the same in the children of the poor and of the well-to-do: the percentage of children of tuberculous parents who themselves became tuberculous was 33.16; the percentage of children of nontuberculous parents was 23.65. This difference of 9.5 percent was found as the result of an inquiry among one thousand families, and could be attributed more to infection rather than to heredity.

In fact, it is infection which is the only essential factor of tuberculosis. Among the predisposing causes of infection must be counted hereditary feebleness of constitution. This predisposition can be combated. This is a well-known fact, best seen in that two-thirds of descendants from tuberculous parents escape the disease. A morbid heredity is a germ-heredity, a heredity of disposition. This is fortunate, for there is hardly a family in which there is not one of those great defects: insanity, tuberculosis, cancer, and all the others, the fatality of which does not appear to be inexorable.

Dr. Tecon recently published a noticeable documentary and analytic work on pregnancy and pulmonary tuberculosis, which gives an excellent general review of this interesting problem of practical medicine (See *Province Médicale*, Sept. 16, 1911.) and any reader who is anxious to know all what is said on this subject can safely be referred to that work.

"Pregnancy," says Bouchut, "is a condition which changes the health of some women for evil or for good. . . . I have seen women who are affected with chlorotic dyspepsia and who never enjoy good health except during their pregnancy and wet-nursing. We know, therefore, that in some women conception arrests the march of pulmonary phthisis, diminishes their cough, and restores their plumpness up to the day of delivery, after which the former evils reappear again, only to end in death."

Now, while it is true that this condition of latency or arrest of tuberculosis did not escape the close observation of Bouchut, it would be a false interpretation of his opinion, and therefore wrong to reproach him for having published the case of a tuberculous woman who during ten years went through three pregnancies ending at term and who in each pregnancy ceased to cough, expectorated much less, and saw her general state considerably improved.

Gendrin shares in the opinion of Bouchut and says, "We observe sometimes that women in whom there exists a considerable organic defect of the lungs before their becoming pregnant feel themselves better and are cured during the first three months of gestation, but about the fourth or fifth the cough, the pains, the expectoration of blood, and the other symptoms of phthisis come back with greater force. These women nevertheless reach to the end of their pregnancy and are happily confined, but die usually some time after confinement.

Already in 1715 Mariceau said, "Confinement is a bad port where females with bad chests perish." Louis insisted, in 1843, that phthisis is aggravated by pregnancy, and reported the observation of cases in which pregnancy was manifestly the cause of acceleration of tuberculosis.

Modern authors seem to be of the same opinion.

"The particularly inauspicious influence of pregnancy on tuberculosis is more marked in the more advanced stages of the disease. At the first appearance of the disease pregnancy accelerates the march of it." (Barbier.)

"In all these observations (being 52 cases collected in the service of Prof. Maygrier in the Charité hospital) pregnancy, even when exempt from complications, proved itself as a condition unfavorable to tuberculosis, as it aggravates the lesion and its accidents." (Proust.)

This conception of the phthisis of pregnant women suggests at once the thought of the danger of congenital tuberculosis threatening the infant.

By congenital tuberculosis should be understood the direct transmission of the disease from the mother to the infant during its intrauterine life. Such men as Laennec, Andral, Billet, and Barthez have admitted this without exception and regard it as a direct law of heredity. Still, this manner of looking at it amounts only to a personal opinion, an interpretation of clinical facts, and lacks yet the rigid control of experimentation which is indispensable in order to form a firm conclusion, which those authors could not formulate because they lacked the as then yet unknown resources of bacteriology.

Baumgarten, in his "Ueber Latente Tuberculose" (1880), considered heredity as the only direct possibility and added that the tardiness of its manifestation is owing to the fact that tuberculosis is a latent disease, waiting with its manifestations for the time when there is a default of resistance in the organism.

The era of experimentation began with Jacobi, of New York, who spoke about it at the Congress of Tuberculosis in 1891. He discovered tuberculous granulations in the liver of a dead-born fetus of seven weeks whose mother died of phthisis three weeks after. This first observation was the point of departure for a number of researches, and the number of authors who add their contingency of new proofs is constantly increasing.

Tuberculosis in a dead-born fetus by direct and incontestable heredity has been confirmed by Meckel, Denins, Huguenin, Sabour, Aviragnet, and others.

Landouzy (*Revue de Médecine*, 1883) made guinea-pigs tuberculous by inoculating them with placental substance taken from a microscopically undiseased placenta of a woman who died of phthisis. The same results were obtained by Aviragnet (Thése, Paris, 1892), Thiercelin (*Gazette des Hôpitaux*, 1893), and by Bar (Société de Chirurgie, 1895).

At the congress of medicine held at Montpelier in April, 1898, Auché and Chambrelent, of Bordeaux, reported the case of a phthisical woman who died three days after confinement. The infant lived about twenty days. At the autopsy of the new-born babe some tubercles were found in the spleen, and the liver was almost caseous. A particle of the mother's placenta inoculated into a guinea-pig rendered the animal tuberculous.

We must not hasten, in the future, to conclude otherwise, by basing ourselves on the fact that tuberculosis is rare in early infancy; for, though this opinion was classic a good long while, we can now affirm—in the presence of a considerable number of works that have been published on the subject the last six years, and above all after the labors of my pupil Dr. Guilbot—that the question has been adjudged, and that without any further appeal. I, myself, and Dr. Guilbot have reported proven cases, adding them to those of Comby, Aviragnet, Bolognésie, Haushalter, Kossel, and many others.

(*To be concluded.*)

ANTIANAPHYLAXIS BY LECITHIN

Achard and Flandin have corroborated the fact that lecithin, injected some hours before the unchaining second injection of the prophylactic serum, hinders the anaphylactic shock. This protective action is good, however, only for injections into the peritoneum, not for intracranial and intravascular injections.

The authors have tried to find out whether the lecithin acts as a neutralizer of the poison which forms during the shock or whether the agent prevents the formation of the poison. They decided in favor of the latter hypothesis.—*Paris Médical*, 1912, p. 179.

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[Anaphylaxis is an unsuccessful term, for it means "aphylaxis." Thus, when an animal had prophylactically a serum injected into it, hypodermically or intravenously, then

the serum of the same animal species becomes highly poisonous to the injected animal after a certain time and remains so for an indefinite time. The same serum, then, which in the first place acted phylactically upon the animal, subsequently made it specifically hypersensitive to the same kind of serum and the animal becomes thus anaphylactically affected for an indefinite time.—THE GLEANER.]

SUPRARENAL INSUFFICIENCY AND TYPHOID FEVER

Emile Sergent has studied, for the last five years, the clinical manifestations of suprarenal insufficiency. In 1899, Sergent, in company with L. Bernard, described the affections which result from a quick destruction of the suprarenals. He showed that the infections and intoxicating diseases frequently engender suprarenal insufficiency, because of the lesion which these diseases provoke in these glands. He described the signs by means of which we might trace the symptoms of the causal affection.

From these notions arose the idea of combating such affections with opotherapy, i. e., by giving suprarenal extract. The results were excellent, notably so in scarlatina and diphtheria.

It is the same in typhoid fever, so that the author, in company with Ribadeau-Dumas, published a memoir (1906) on the value of the phenomenon which he denominated the white suprarenal line (*ligne blanche surrénal*).

New observations make him to insist at present on the important part which suprarenal deficiency playt in syphoid fever. The habitual exhaustion and the small pulse during all the typhoid state are signs of suprarenal insufficiency. These signs are more accentuated in the severe adynamic or cardiac forms and reach their maximum in certain severe cases which simulate peritonitis or internal hemorrhage and get well rapidly on suprarenal therapy.

From the above data, the author is led to the employment systematically of adrenalin in all cases of typhoid fever and to use the total extract against the accidents of intense acute suprarenal insufficiency. ["Total extract" is a misnomer, as it is no extract at all, and only a powder of the dried entire suprarenals.—THE GLEANER.] The author's personal practice permits him to affirm that, with the exception of the hypertrophic and hemorrhagic forms, which defy any and all efforts, this method, which he recommends together with the usual treatment (baths, etc.), will give the most favorable results.—Académie de Médécine, in *La Quinzaine Thérapeutique*, 1912, p. 234.

LABORDE ON THE POSOLOGY OF SODIUM CINNAMATE

The hypodermic injections of sodium cinnamate, according to Dr. Jean Laborde, of Paris, have a very distinct and favorable effect in every case where the organism has the need of being generally toned up. "Without limiting them to cases of pulmonary tuberculosis, as was the fashion, I was struck," says Dr. Laborde, "with the rapidity and solidity of the results obtained by them, and I do not hesitate to affirm that there is a very evident superiority in the cinnamate over the various cacodylates. But in my experimentation, I have made a capital point, so far as the usual doses are concerned, that they are too low in the formularies.

"Proceeding with caution, as we have to do in all therapeutics, I think we may start at first with the injection of one ampule containing 5 cubic centimeters (81 minims, making 1 centigram in the cubic centimeter.) This dose at the beginning, which already is much higher than we find given by various authors, may be carried up rapidly to 1 1-2 centigrams in 1 cubic centimeter, and soon even to 2 centigrams. And in more than three hundred patients I have never met any intolerance, not even on injecting 5 cubic centimeters at once.

The beneficial effects are soon very manifest, and the patients, too, who declared that they had not received any benefit at all from the treatment at first, now claimed to have received a singularly reconstituent action.

"In my daily practice I have encountered some pharmacists, and some fellow practicians too, who, having read what is usually said about the cinnamates, consider the doses I give exaggerated. I have done my share in making the experiments, and they who have been willing to follow me in my special posology have had their share of good results. We can inject 10 centigrams of sodium cinnamate in twenty-four hours without the least danger.

"I am convinced of the usefulness of consulting one's own personal experiments with regard to many medicaments, in preference to relying on formularies that frequently are inexact, and often unreliable."—*Paris Médical*, 1912, p. 166.

MISCELLANEOUS ARTICLES

The International Congress of Hygiene and Demography

IF any man is in need of humility, let him attend a great congress like the one recently held in Washington. I know of no better method of bringing home to any thoughtful person the tremendous strides being made in science, in all its branches. Preventive medicine is being revolutionized with the rest. Some of us have realized this but dimly; but those of us who attended the fifteenth International Congress of Hygiene and Demography now know it.

In the splendid address with which President Taft opened the Congress, he made a very significant statement, which contains food for thought. It was this: The greatest impetus preventive medicine has ever received in this country, and perhaps in any country, came from the Spanish-American War. What we have learned concerning the causes of disease and its prevention, as a more or less direct result of that war, has revolutionized sanitary medicine. It we have gained nothing else, the knowledge thus obtained is well worth all that the war cost us.

This is a strong statement—but isn't it true? As a direct result of the Spanish War we have the development of the mosquito-theory of the transmission of yellow-fever; the eradication of yellow-fever from Cuba; the demonstration at Panama of the possibility of eradicating malaria in the tropics *and at home;* the practical solution of the problem of typhoid fever in military camps and the evolution of preventive vaccination against typhoid fever; and a modification of quarantine methods for plague, cholera, smallpox, and all the rest, with wonderful increase in efficiency. Just stop and think toward what all this is leading.

No more startling testimony to this change was submitted than in the paper of Dr. A. H. Doty, formerly health officer of the port of New York. Quarantines were formerly based upon the fomites theory, i. e., that contagious diseases are transmitted by clothing, rags, and other substances which have come in contact with persons suffering from these diseases. The universal remedy for all was fumigation. Dr. Doty asserted that the fomites-theory, which is a relic of prebacteriologic days, is absolutely unsound. Plague, which was formerly thought to follow caravans in the East, is not known to be carried by flea-infected rats; yellow-fever and malaria are transmitted by mosquitoes; typhoid fever, by flies or by human carriers and their discharges; and typhus fever, as recently shown by Anderson and Goldberger, by body-lice. In one epidemic of 700 cases, which Doty investigated, only two cases of the disease occurred among the better class—those not likely to be infested with vermin. This disease was formerly thought to be brought to America by rags imported from the Orient.

Dr. Doty said that those engaged in the handling of rags have not been shown to be more subject to contagious diseases than others. Investigations made in New York and in Egypt absolutely dissipated the argument that rags and second-hand clothing are a source of epidemics. Nor is there any danger in handling money, said Dr. Doty. The money microorganisms do not transmit infectious diseases. Also, there is no evidence that the desquamated epithelium from patients suffering from scarlet-fever and measles causes these diseases. This, he asserts, is a negligible factor, the mucous discharges being the chief source of danger. The greatest peril is in the mild and unrecognized cases. Many a "cold in the head" is responsible for an epidemic of measles; many a "sore throat," for scarlet-fever.

Various speakers at the congress emphasized the fact that the three methods in which in-

fectious or contagious diseases are transmitted are by *persons*, by *discharges*, and by *insects*. Doty dissipated the theory of fomites-transmission; and Chapin, of Providence, read a paper designed to show that diseases are not air-borne—not even smallpox, which it was at one time thought could be carried through the air in some mysterious manner for a mile or more.

Naturally much attention was given to typhold fever, and much time was devoted to the discussion of the typhoid-carrier. Ledingham of the Lister Institute, London, said that from 50 to 60 percent of cases were traceable to this source. He pointed out at length the danger of these individuals, especially when they might be engaged in occupations which brought them into contact with the handling of food supplies, and especially milk. Supervision is difficult, and methods of ridding these individuals of germs thus far have not proven very successful. In a series of cases which he studied, 2.5 percent continued carriers for one year after having the disease. A. C. Abbott, of Philadelphia, reported some interesting experiments conducted in his own laboratory by his assistant, which seem to show that, by means of typhoid vaccination carriers harboring the bacillus typhosus in the gall-bladder may be permanently rid of the organism. Norris said urinary carriers were curable with urotropin, and Ledingham propounded the following significant aphorism: "No carriers—no typhoid fever."

The importance of thorough disinfection of the stools of typhoid-fever patients was much dwelt upon, and various expedients were suggested. The simplest was that of Kaiser, as reported by Prausnitz, of Graz, Austria. It consists in covering the fecal matter, in the vessel in which it is received, with warm water, enough being employed just to cover the fecal mass; a quantity of unslacked lime equalling 25 percent of the content is placed in the receptacle before adding the water. The vessel is then tightly covered with a stone top and kept covered for two hours. The slacking of the lime develops heat enough to sterilize the contents of the vessel.

A splendid contribution to the problem of water sterilization was submitted by Major C. R. Darnall of the United States Army, in a paper read before the military section. He has devised an apparatus, which was in operation in the exhibit hall, for sterilizing drinking water with chlorine gas. The chlorine, condensed into liquid form, is supplied in metal cylinders, and by a cleverly devised arrangement is released into the water-mains, in any desired quantity, where it immediately combines with any organisms that may be present, destroying them and thus rendering the water potable. The efficiency of this method has been demonstrated by frequent bacteriological tests. The apparatus is so small that it might almost be packed in a trunk, yet it has a capacity of from 5 to 5,000,000 gallons an hour; and it can be maintained at a cost of only about 40 cents for each one million gallons of water sterilized.

We may well be proud of the fine work done in the United States Army. Not only have our medical officers perfected camp hygiene so as to make it difficult for cases of typhoid fever to originate among the men of our army, but they have developed the method of vaccinating against the disease until our soldiers are freer from it than those of any other army in the world. Major Frederick F. Russell's report of results accomplished was a fascinating one. Prior to the introduction of prophylactic bacteriotherapy, there occurred from 200 to 500 cases of typhoid fever annually among our troops. (We shall not soon forget the terrible mortality of the Spanish War.) Vaccination was introduced in a small way in 1909, and the number treated was progressively increased from year to year until it is now practically compulsory. In 1910, there were 193 cases of the disease and 14 deaths; in 1911, 68 cases and 8 deaths; in 1912 (first six months), 16 cases and 1 death. Of these 16 cases, 12 occurred among those who had not been vaccinated. Among the 82,000 soldiers successfully vaccinated, of whom Russell has records, there occurred only 4 cases of typhoid fever.

The prevention of venereal disease was the subject of a symposium in the military section, and was hotly discussed in the infectious-diseases section. In the section first mentioned, papers were read by Vagades, of the German Army; Col. L. M. Maus and Major Deane C. Howard of the United States Army; Medical Inspector George A. Lung, of the United States Navy; and C. A. Rost, of the German Navy. In our army and navy much attention is given to individual prophylaxis and with surprisingly satisfactory results. Men enlisted in the army who have exposed themselves to infection are required to

report for treatment, and before exposure are provided with packets containing a calomel ointment for external application and a silver solution for injection into the urethra. As Colonel Maus and Major Howard both pointed out, this method of treatment, if properly applied within ten hours after exposure, can be depended upon to prevent the incidence of venereal disease. Major Howard reported a reduction of venereal disease in the army in Philippines, where it was used, of about 72 percent within the last two years. It has fallen from 227 per 1000 in 1910, to 63 per 1000 in 1912, and he believes that, if it could be generally adopted, the proportion would fall to about 25 per 1000. The failures were mainly attributable to careless use of the prophylactic, especially when the men had been drinking at the time of coitus. The packets are generally of the type supplied the army by Dr. Richard Slee, Swiftwater, Pennyslvania, who can give information concerning them to those having a proper interest.

One of the most spirited discussions was over the papers of Dr. Rosenstirn, of San Francisco, and Dr. Willson, of Philadelphia. The former described in detail the municipal clinic maintained in San Francisco for the examination of prostitutes. These women are required to report to this clinic at 5-day intervals, at which time they are provided with record books, each containing the woman's picture for the purpose of identification. In this book are entered the results of the examination, and, if venereal disease is discovered, the woman is given treatment; or, if it is declined, she is charged with vagrancy and committed to a hospital for proper care, her book being withheld until she can present a clean bill of health. A registration fee of 50 cents is charged, but treatments are free. Patrons of the underworld resorts are informed by wall-signs, prominently displayed, that these examinations are required, and are advised to refuse to have relations with women who cannot show satisfactory records. While this method of reglementation has been applied in only a relatively small portion of the prostitutes known to be plying their calling in San Francisco, Dr. Rosenstirn pointed out that there had already been a decided reduction in the incidence of venereal disease. Dr. Willson, who is secretary of the executive committee of the American Federation for Sex Hygiene, hotly combated the position taken by Dr. Rosenstirn, asserting that reglementation of prostitution had failed in Europe, did not reduce the amount of venereal disease, and distinctly encouraged vice, through its false promises of safety in illicit intercourse. A discussion that was rapidly becoming acrimonious was shut off quickly by the chairman, "for lack of time"—much to the dissatisfaction of those present, many of whom showed great interest in this important problem.

The paper of Dr. Simon Flexner, of the Rockefeller Institute, upon cerebrospinal meningitis attracted a large audience. The serum devised by this brilliant investigator for the treatment of this disease was described at some length; and Dr. Flexner also told something about the epidemic in the southwest, where it was used, under the direction of Dr. A. Sophian, with very satisfactory results. Whereas, before the introduction of this serum the death-rate from acute meningitis was about 70 percent on an average, by its use the percentage of recoveries has become 70 percent, and Dr. Flexner predicts a still further reduction in mortality as soon as we can learn how to diagnose the disease early and know better how to use the serum. A recurrence of this disease in epidemic form during the coming winter was predicted by several speakers.

A demonstration that attracted a great deal of interest in the exhibit hall was that made by Dr. C. C. Bass, of New Orleans, who has succeeded in growing the plasmodium malariæ *in vitro*; in other words, in the test tube. By adding dextrose in specified proportion to a contrifuged sample of freshly drawn blood, he was able to secure a medium on which the organism can be carried successfully through its entire life-cycle, outside of the human body. The significance of this discovery may not be apparent at first thought. Its immediate importance lies in the fact that, by growing the organism in the test tube, its complete life-cycle can be studied at length and in detail; thus forging another link in the chain being created so rapidly for the eradication of malaria.

Returning to the subject of "carriers." Dr. W. L. Moss, of Johns Hopkins, reported a careful "survey" of Baltimore school children for the discovery of diphtheria-carriers with a similar investigation of other individuals—students in the Johns Hopkins University, professors in the same institution and their families, residents in boarding houses, and pupils in a private boarding school. In all,

1217 school children were examined, with the discovery of 49 carriers. Of the latter, 8 individuals, or about 18.8 percent presented virulent organisms. After an interval of from one and a half to three months, 10 of these children still gave positive cultures. The second group examined was of about the same number as the school-group, and yielded nearly the same results. In all, 2507 individuals were examined, with 89 positive diphtheria cultures. Assuming this proportion to be fairly accurate, Moss concludes that there are about 20,000 diphtheria-carriers in Baltimore, and of these, 1 in every 5 presents the germ in a virulent form. There were 1035 cases of diphtheria in the city the preceding year—an average of 4 carriers to every case. In following up the 49 carriers among the school children, Moss elicited some interesting facts. Of the 49, only 3 were known to have had diphtheria; in 3 others there was known association with diphtheria cases; 9 of the remaining had had throat trouble of some kind. The surprising fact was that in no instance was it possible to show that any other person had contracted diphtheria from any of these child carriers. Dr. Moss asks the pertinent questions: Are other organisms than the diphtheria bacillus necessary for the development of the disease? Do others prevent it? Do certain persons possess immunity? These are problems well worth pondering.

For the treatment of diphtheria-carriers, in which the bacteria lingered in the throat in spite of antitoxin or the use of ordinary local measures, Ravenel, of the University of Wisconsin, recommended the procedure first suggested by Schiotz. This consists in the application to the throat and nose of a spray of a pure living culture of the staphylococcus pyogenes aureus. Ravenel had an opportunity to try this in one of the Wisconsin state institutions. It was employed in 23 cases, and with no distinct failures, while it acted like magic in the majority of the cases. Success was not as marked when there were large spongy tonsils, but in these cases massaging the tonsils helped. The pyogenes cultures were sprayed into the throat and nostrils three times a day, being continued until the patient showed a disposition to swallow because the fauces were wet. There were no bad results, small furuncles appearing about the nose in two cases only. Polyvalent, virulent, and moderately virulent cultures all were used, and all were effective. Here is a method of treating these diphtheria carriers which is easily applied and seems to promise success. Why not try it?

(*Concluded next month*)

UTERINE ATROPHY IN A WOMAN OF TWENTY-FOUR

Being consulted regarding the following case and the condition being more or less rare, I will give a brief description.

The patient, a farmer's wife, twenty-four years of age, has been married seven years. The family history is negative. The personal history is negative as regards diseases of childhood and up to the beginning of present trouble, which began five years ago. She has one living child, six years old, and another was born about a year and a half afterward, at which time the present trouble began—this child living only eight days. She was always more or less constipated and has had no menstrual flow since the birth of the last child.

At the time of her last delivery the placenta was adherent and was allowed to remain in the womb until it had decomposed and was removed a mass of stinking debris, the physician using his fingers to effect the removal. After this, she says, she has had "female" trouble all the time, complaining of dragging, backache, headache, general nervousness, lack of appetite and inability to sleep. Soon after she was able to be up her physician recommended some patent tablets, these to be inserted in the vagina as far up as possible, for the severe flow that she was having. Then every time after she inserted one of those tablets there came from the vagina what appeared to be large masses of flesh the size of an egg. Soon the need for these ceased.

Since then she has been passing from one physician to another to find out why she never was "regular" again, and has been treated by many, examined by some, and not by others, and always with the result of no improvement from the treatments.

The patient is a slender woman, five feet tall, weighs 105 pounds. She is emaciated, her temperature is normal, pulse is 55, respiration is 20, she has acne rosacea on both cheeks. The chest examination was negative except that the heart-sounds are very weak, being scarcely audible, and the apex-beat is an inch to the right of normal. A general visceroptosis is present, especially as to stomach and transverse colon, the latter being heavily loaded with the accumulated retained feces. The external genitals have the appearance as

of adolescence. There is very little pubic hair. Both labiæ are small and pale, and, were it not for the peritoneal laceration, the vagina would scarcely admit more than one finger. The remains of the uterus and ovaries are palpable, the former being about the size of an average English walnut. The cervix is small, scarred, and an attempt to pass the uterine sound failed, not being able to pass more than one-half inch.

No treatment was instituted, except to relieve the ptosis of the abdominal viscera and to correct the constipation. The writer is not familiar with any treatment that would benefit the atrophic organs, and instituted none. It may be that a careful examination, if made sooner, might have suggested some treatment that would have stopped the atrophic process. It does seem that the placenta should not have been allowed to remain so long in the uterus before removal and that subsequently the use of the caustic tablets did not help any, but rather assisted the process of sloughing.

J. D.

—, Oklahoma.

COPPER IN GASTROENTERITIS

I was called to treat a child 3 years of age, and found these conditions: Vomiting of milk curds; diarrhea of foul-smelling stools; temperature at 5:30 p. m., 102.2° F.; tenderness of the entire abdomen; headache. The child had eaten heavily of raw grapes and then drank considerable milk the afternoon and evening preceding the date of call. Although weaned and on a general diet, this child had been in the habit of taking his bottle just before arising in the morning and also on going to bed at night. Conditions and symptoms pointed to a toxic condition of the alimentary tract (and possibly ptomaine), with some slight inflammation of stomach and bowels.

I first cleaned out the bowels thoroughly with calomel and saline laxative. For the fever I administered aconitine at half-hourly intervals, and cool baths prior to putting the child to bed for the night. As an intestinal antiseptic I gave copper arsenite, 1-1000 grain every half hour. The following morning I was informed that the child had vomited from time to time until 10 p. m., when all conditions showed improvement, and that now the boy seemed to be normal in every way. I ordered the milk withdrawn and gave a prescription for copper sulphocarbolate, 1-64 grain every two hours, which had the effect of rendering the bowel discharges practically odorless and of normal consistency. The remedy was continued for three days, at which time the child was seen on the street, in good condition and playful as usual. There occurred no rise in temperature after 10 p. m. on the first day and no return of any of the symptoms mentioned.

It is very probable that copper sulphocarbolate from the beginning would have been better than the arsenite, but I did not happen to have it in my case and it seemed that the patient demanded prompt action, consequently the use of the arsenite. I did not give the condition a name, but it was, in all probability, gastroenteritis with some slight general toxemia due to fermentation. I am reporting this case simply to demonstrate the prompt and efficient action of the copper salts, and not because there was anything particularly striking about the case.

GEORGE L. SERVOSS.

Gardnerville, Nev.

BAD BREATH

Dr. George M. Niles, in a paper on this subject contributed to *The American Journal of Gastro-Enterology for July*, claims that the stomach is far less often to be blamed for a disagreeable breath than is usually asserted, and that this long-suffering viscus really is innocent of most of the high crimes and misdemeanors with which it is charged.

Dr. Niles cites a busy dental surgeon of his acquaintance who has offices in the same building with a rectal specialist. On comparing notes, they both decided that the dentist, in his daily routine, encountered more offensive and septic "cavities" than did the latter in his rectal work.

The sources of bad breath are most frequently to be found in the mouth and the surrounding areas. In addition to the lack of cleanliness, fruitful causes of this condition are carious teeth, pyorrhœa alveolaris, tartar, septic gums, glossitis or stomatitis. Then we must also search for necrosis of the nasal bones, purulent hypertrophic or atrophic rhinitis, ozena, septic tonsillitis, and other infections of the nose and nasal pharynx.

Further, bad breath may be due to septic or putrefactive changes within the lungs, which are usually to be surmised by copious or putrid sputum or by physical signs manifested on auscultation or percussion.

As a close second to an unclean mouth in tainting the breath, come abnormal conditions in the intestines. When protein putrefaction

takes place in the small, or when undue retention of feces occurs in the large, intestine, in addition to the normal protein putrefaction there, the excess of these end-products, which the ordinary emunctories cannot care for, is eliminated through the expired breath.

Another frequent predisposing cause leading to bad breath lies in the ridiculously small amount of water ingested by some individuals. To expect the body to do its sanitary work with an insufficiency of fluid, would be the same as to require houses or cities to be kept clean with an inadequate water supply. In a number of instances the author has seen a polluted breath clear up as if by magic after the thirsty and desiccated tissues had been laved with copious and continuous draughts of "the universal solvent."

The gist of Dr. Niles's article is contained in the old "clean-up, clean-out, keep-clean," which is to be applied, not only to the intestinal tract by means of laxatives, but, if necessary, by mechanical remedies such as toothbrush, mouth-wash, and so on.

ICHTHYOL IN PULMONARY TUBERCULOSIS

Dr. William Odell, of Torquay, England, presented to the recent Tuberculosis Congress, in Rome, a report on his experiences with the use of ichthyol in pulmonary tuberculosis (*Merck's Archives*, June, 1912). Since he reported, in 1909, on the results of treatment with ichthyol in 123 patients, he has treated 66 additional patients, in only 16 of whom there occurred loss of weight, 4 of them being too far advanced to be amenable to any treatment.

In the other patients the increase in weight was very marked and amounted to as much as 17 pounds for each during the average stay in the hospital of about three months. This increase in weight was accompanied by a healthy, ruddy complexion and a bright, cheerful demeanor, which, Odell says, is one of the invariable effects of the treatment with ichthyol.

Although any direct action of the remedy on the germs of the diseases may be considered excluded, it has been proved by numerous trials that the internal administration of ichthyol promotes nutrition, retards the waste of albumen, stimulates digestion, regulates the bowels, increases the appetite and the powers of resistance of the enfeebled organism. Ichthyol has a reducing action on tissues, and is antiphlogistic, analgesic, and antiseptic, having a direct influence upon pathogenic bacteria, especially the streptococcus and diphtheria bacillus.

Dr. Odell usually begins with 7 1-2 minims of ichthyol in half a wineglassful of water three times daily, and gradually increases to 10 drops three times daily. He has seldom given beyond this dose. In most cases he has also given malt and oil, which, with good wholesome food, helps materially; but, by comparing results obtained now with those before treatment by ichthyol was adopted, he does not hesitate to say that the improvement has been due to the ichthyol.

The present writer often has been struck by the improvement of nutrition in those of his patients whom he persuaded to persist in the use of ichthyol. While the drug is at first decidedly disagreeable and is to some patients even nauseating, this writer has found that they become accustomed to it in the course of a week or two and that by that time they experience the decided sense of well-being, due undoubtedly to the improved nutrition and to the stimulation obtained thereby. He has noticed that patients who are taking ichthyol for a sufficient length of time are far more hopeful and elastic, and more conscientious in following their course of treatment. The present writer is convinced that the persistent use of ichthyol in pulmonary tuberculosis and in other wasting diseases materially improves the prognosis. He usually administers the remedy suspended in an equal amount of peppermint water or permits his patients to take the drops in capsules.

TEETH AND TOXEMIA

I am very much obliged to you for kindly sending me a copy of your excellent journal and am flattered that you should notice the writings of so humble a person as myself. [See editorial, page 795, August CLINICAL MEDICINE.—ED.]

I am afraid I have touched you on the raw a little concerning teeth. I have been led to believe that Americans are peculiarly averse as a nation to the extraction of teeth.

You of course realize that I do not advocate extraction of a healthy person's teeth if they are sound, root and crown. When one contemplates, however, the truly terrible fate of many sufferers from rheumatoid arthritis, one feels it is better the teeth should go than that they should be a source of mischief, and personally I have yet to meet one of them who has really healthy tooth-sockets.

You cannot convince me that such germs as the diplobacillus malæ, micrococcus ca-

tarrhalis, etc., will remain localized in one or two sockets.

If a few teeth are extracted, what happens? A plate is worn or some other device. Later on some more teeth must go, then a fresh plate, and so on. All the time the patient is being more or less poisoned.

I cannot see that it matters much which starts first, the dyspepsia or the tooth infection, they soon create a vicious circle.

I am fully alive to all that has been done in the matter of vaccines, intestinal antiseptics, lavage, and all that.

I lay a great stress on previous acute illness, such as typhoid, as probably the basis of all these troubles. The tenacity of germs, once they have invaded the human system, is too well known to need comment.

W. J. MIDELTON.

Bournemouth, England.

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[We are most happy to be able to present Dr. Midelton's views upon this subject. In our editorial we criticised the position which he had taken in his paper in *The Practitioner*—a position which seemed to call for wholesale extraction of the teeth in cases of pyorrhea. There is certainly no man in America who knows more about pyorrhea than Dr. Eugene S. Talbot, of Chicago. We have therefore submitted the corresponsdence to him, and his comment follows.—ED.]

THE RELATION OF RHEUMATIC ARTHRITIS TO PYORRHEA

I have read your editorial on "Radical Methods in Surgery" in the August number of CLINICAL MEDICINE, page 795, which is a comment on Dr. W. J. Midelton's paper on "The Relation of Rheumatic Arthritis to Pyorrhœa" published in *The Practitioner*, January, 1912. I have also read Dr. Midelton's letter to the editor, and I cannot refrain from saying a few words upon this most important subject.

From his letter and from your criticism, I can obtain a general idea of his line of reasoning. Research in the past two or three years has rapidly revolutionized our view in regard to the etiology of a number of the obscure diseases of the body.

Rheumatoid arthritis, endocarditis, pernicious anemia, nephritis (both acute and chronic), dyspepsia, and many other diseases the etiology of which has been unknown, are now ascertained to be due to infection of the mouth. Dr. Miller has shown that more than fifty varieties of germs are located in the mouth, in and about the teeth. Many of these have not been classified. Every observing dentist has seen his patients recover from systemic diseases, and even those having no diseases apparently gained flesh after having their mouths put in order, evidencing the fact that there is a relation between the germs in the mouth and systemic diseases.

Some of the germs known to be present in the mouth and which become locally absorbed or are taken into the stomach and the alimentary canal, producing irritation, are the diplobacillus malæ, micrococcus catarrhalis, pneumococcus, tubercule bacillus, streptococci, staphylococci, and many others. Not infrequently the germs in the mouth and about the teeth are absorbed and taken directly into the lymphatics in the neck. Blind and open alveolar abscesses in the jaws are fruitful sources of disease, while pus about the roots of the teeth and germs collecting in the cavities of decayed teeth are fruitful sources of infection.

The mechanics of dentistry in our schools are given more attention than the systemic relations of disease—the repairing of one or more teeth regardless of the systemic results, etc. Hence bridges are attached to loose teeth and to those with blind abscesses, the most dangerous of all infection, since it is difficult to locate the trouble. Modern dentistry, therefore, may be set down as a most pernicious method of practice. In the good old days of extraction and the application of artificial dentures the patient was in safer hands than now with all the modern ideas of crown and bridge work.

At the last meeting of the American Medical Association, held at Atlantic City, June, 1912, there were on exhibition twenty-two hearts, obtained from a New York hospital, showing bacterial endocarditis. These infections were all supposed to originate in the mouth. Would it not be a wiser thing to remove every diseased tooth or all teeth producing diseases from the mouths of our patients suffering with any of the systemic diseases the origin of which is obscure, as suggested by Dr. Midelton, and insert artificial dentures, than to have them suffer a slow death as many of them are now doing and have been doing in the past?

The final analysis shows that the time has now come when the medical profession should demand that every person operating upon or treating the human body locally or constitutionally should acquire a medical education.

EUGENE S. TALBOT.

Chicago, Ill.

[If we have interpreted Dr. Talbot's teaching correctly, he believes that pyorrhea is the result of an inflammation of the gums and alveolar process, due to pus-germs in the mouth, in which the teeth and surrounding tissues provide foci of low resistance for the attack of the ever-present bacteria. The inflammatory process preceding the infection, which he has called "interstitial gingivitis," is due to both local and constitutional irritations.

One of the main underlying causes is an acidemic condition, arising largely as a result of fermentative and putrefactive processes in the intestinal canal. It is important that the dentist or physician should attack this fundamental cause, without losing sight of the mouth infection. Pus-cavities, pus absorption from whatever source, should of course be given immediate and vigorous attention, but unless the disease has progressed to an advanced stage the ravages of the microbic flora of the mouth can usually be arrested without resort to wholesale destruction of every tooth upon which suspicion has laid its finger. If preservative efforts fail, as they doubtless will in many instances, then it is time to intervene and extract the trouble-producing tooth or teeth. Teeth that are badly decayed should always be repaired or extracted, since the cavities are fruitful localities for the accumulation of pathogenic germs. That, we believe, is Dr. Talbot's position—as it is ours.—ED.]

HOW ONE MAN TREATS TYPHOID FEVER

If you wish to cure your patients in half the usual time, give them 5 to 10 drops tincture of echinacea; or, if this does not agree, the echinaceoid tablets. Give also 1-grain tablets of methylene-blue three or four times a day. If stools are still foul and copious, give the compound sulphocarbolates four or five times a day.

Feed only milk, three or four pints a day. If milk disagrees, stop it a day or two and give broths or barley water instead. Nausea or curds in stools indicate too much milk. After a day or two of rest, milk is often digested better than before. Be sure they get two quarts of liquids a day. If constipated, give castor oil.

With this treatment I have kept the temperature below 102.5° F. and have found that it will become normal in two or three weeks. Some will say this is not typhoid fever. I also used to have my patients in bed six to eight weeks when I did not know better—but it's the real thing, all right.

E. M. JACOBS.

Manitowoc, Wis.

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[Of course there is no "cut and dried" treatment for typhoid fever. The physician must meet the indications presented in every case, but we agree with Dr. Jacobs that there are certain remedies which may practically always be used with benefit. One of these, upon which we have come to depend, is the combination of the sulphocarbolates. This "cleans up" the intestinal canal better than anything else we know about. Our eclectic brethren get splendid results with echinacea, which they use as a systemic antiseptic. We have used it and like it, preferring the concentration, marketed as echinaceoid. It can do no harm, and in many cases it is apparently productive of decided good.

Dr. Jacobs says nothing about the use of the artificially soured milk, but there are so many testimonies as to its value that it certainly should be tried. When it is distasteful to the patient or not well tolerated, suitable buttermilk tablets (containing the Bulgarian bacillus) may be taken by mouth.—ED.]

THE DOSAGE OF SPARTEINE

In a study of sparteine, George E. Pettey (*American Journal of Surgery*, July, 1912) says that sparteine sulphate has frequently failed to exert its remedial effects because it was administered in too small doses. In contrast to the average dose of 1-5 grain, as given by the last U. S. Pharmacopeia, Bartholow indicated, many years ago, doses of from 1-2 to 2 grains as proper. Dr. Pettey believes that 1 1-2 to 2 grains would be more nearly correct.

In Dr. Pettey's opinion, the hypodermic tablets of such small dosage as 1-30 to 1-10 grain are a mistake. Many practical men have tried the alkaloid in these fractional-grain doses, and not being able to secure the remedial effects from the drug in such doses, have thrown it aside as inert or inefficient. But this inefficiency has been due solely to the fact that they have not administered the remedy in quantities sufficient to establish its physiologic effects. Until that has been done, no grounds exist for the rejection of the remedy.

From his prolonged investigations of this remedy, in which the author has given doses of all sizes, from the fractional grain up to 3 grains at intervals of two hours, he concludes

that doses of 2 grains given at intervals of three to six hours would establish and maintain the full physiologic and remedial effects of the drug in the average adult. In urgent cases an initial dose of 2 grains should be repeated at the end of two hours, after which intervals of three, four to six hours may be observed.

We believe that Dr. Pettey first gave his experience concerning the dosage of sparteine in THE ALKALOIDAL CLINIC, November, 1905. In that number he made the statement that this valuable drug combined in a singular degree the actions of digitalin and veratrine. Like the former it slows and strengthens the heart's action; like the latter it dilates the arterioles, thereby lowering blood pressure. Such a combination of actions, as will readily be seen, possesses great possibilities. Its diuretic action has frequently been referred to.

Sparteine is not used nearly as much as it should be, probably, as Dr. Pettey has pointed out, because it is used habitually in too small doses. We urge readers of CLINICAL MEDICINE to try it faithfully and tell us of their results.

GERMAN MANUFACTURERS—A PROTEST

In an editorial in the August number of CLINICAL MEDICINE the methods employed by German houses in the sale of their products in the United States were criticized.

In making this criticism, the actual state of affairs undoubtedly had not been properly investigated or considered. Taking the actual cost of manufacture as a basis, the prices certainly would seem high; on the other hand, the expenses which have to be added in order to make a new preparation a paying proposition are the real cause of this augmentation.

These additional expenses include the cost for the maintenance of extensive laboratories, the royalties which have to be paid to investigators, the protection of the process and the name, the high rate of duty with which the importation into this country is blessed, and last, but by no means least, the cost for propoganda necessary to keep the name of the drug before the physician. These items all entail large expenses and you are, of course, aware of the fact that of many products which are turned out comparatively few survive the scrutinizing and final tests by the profession at large.

The substitutor who offers a cheap imitation of a successful article has none of these expenses. He is a parasite and can sell his concoction at a nominal price in comparison with the honest producer. As an example, a substitute for salipyrin may be had at about half the price of the real article, but a discriminating physician will not risk ruining the stomach of his patient (suffering from rheumatism or influenza) nor his own reputation for the sake of a few cents in giving him a crude mechanical mixture instead of the original compound.

In regard to your specification *"German* greed," we would like to call your attention to high-class American products which in Germany are sold at a very considerable advance in price and against which the German people do not complain. The German physicians look for the meritorious product, and for the use of the American physician the best is also none too good.

RIEDEL & CO.

New York.

THE BULGARIAN MILK OF ANTIQUITY

In the thirteenth book of the Iliad, in the first paragraph, Jove decides to let things take their course. He turns his glance away from Troy and allows his glance to rest on Thrace and Mysia. Cowper's translation reads:

. . . . on that land looked down remote
Of the horse-breeding Thracians, of the bold
Close-fighting Mysian race, and where abide,
On milk sustained and blessed with length of days,
The Hippomolgi, peaceful, just and wise.

Mysia lay between the Danube and the Balkans, where modern Bulgaria lies. I hope no one will try to push those Hippomolgi farther east or north, because it is more to the point to have them inhabitants of Mysia.

The king's remembrancer should now call attention to the misstatement that there is nothing new under the sun.

A. L. KENNAN.

Lalgarh, Midnapare District, India.

THEY ARE INTERESTED!

Here is an incident that proves two things first, that subscribers to CLINICAL MEDICINE read it carefully; second, that there is an intense interest in the exclusively scientific aspects of medicine and in clinical laboratory work especially.

In his article in the August number of CLINICAL MEDICINE, page 827, Dr. B. G. R. Williams said that he would send free a description of the ink method of identifying the germ of syphilis to those interested, providing they would send postage for the

reply. Upon October 14 he wrote us as follows:

"I received exactly 512 inquiries in regard to the ink method for treponema pallidum, which I believe to be a record, inasmuch as it represents an unusual interest on the part of the practitioner in the good things pertaining to accurate diagnosis."

This again convinces us that the most alert, the most progressive and the most ambitious men in the profession are enrolling themselves among the readers of CLINICAL MEDICINE.

CACTUS AND CACTIN

Having tried it on frogs and dogs with no effect, some nonpractising authors of works on therapeutics concluded that the fluid extract of cactus, or cactin, is therapeutically inactive with human beings. In this stand they find themselves opposed by many practitioners of wide experience. No less a physician than Sir Clifford Allbutt (Saunders' "Handbook of Practical Treatment," 1911) has found cactus the best remedy for the irritable symptoms of functional heart disease, and very useful in convalescence from heart strain by effort. The dose of the fluid extract of cactus is about 15 drops.—Editorial from *The Denver Medical Times* for September, 1912.

PERNICIOUS VOMITING OF PREGNANCY—A CASE

Dr. A. V. Lyon's article upon the pernicious vomiting of pregnancy, in the September number of CLINICAL MEDICINE, was very interesting to me. I have read of this treatment before, but the subject is one of such vast importance that I wish every physician could read this timely and important article.

I have just returned from the East, where I was called to attend the funeral of my youngest sister, who died in Ohio, July 5, from the pernicious vomiting of pregnancy. It is of her case and the way she was treated, of my own diagnosis and what I consider should have been done, that I wish particularly to write.

She was twenty-five years of age, a strong, healthy young woman, married last October, and pregnant seven months. She suffered from the usual nausea and vomiting; but bear this in mind, *she was obstinately constipated from the beginning.* One of the leading local physicians was early called to see her. I have it from good authority that he made light of her condition, instead of instructing her, as he should have done, in the proper care of herself and impressing upon her mind how highly important it was that her bowels, skin and kidneys should be kept active—especially the bowels. At seven months, violent vomiting set in; after three or four days at her home she was taken to the hospital, where after ten days of intense suffering she passed away.

Now read this, you army of "clean-out, clean-up and keep-clean" fellows. There is no record of her bowels being looked after, either at home or at the hospital. *Ten days at a modern hospital and no record of a bowel movement on the chart*—two weeks, including her stay at home, and no bowel movement. Three physicians, two nurses, a modern hospital, and a history of obstinate constipation! I questioned the nurses; they said the doctors gave no orders. I questioned the attending physicians; they said the nurse stated the bowels had moved. Why did the chart not show it? The nurses said everything that was ordered by the physicians and that occurred in connection with the case was charted.

Now as to the treatment: Morphine was given in 1-4-grain doses hypodermically; there were rectal injections of normal saline solution by the drop method, which were never retained; and strychnine and digitalis were ordered toward the end. At 5 p. m., the evening before she died, she was ordered 1-4-grain morphine hypodermatically. After this she became unconscious and remained so until the end. At 3 a. m. the attending physician was called up by the nurse and her condition reported. He would not respond to the call, but ordered the nurse to give a cold bath. She had a temperature at that time of 102° F. and was dying. The doctor denied ordering the cold bath, but it was charted and, the nurse said, given by his orders. How inhuman and brutal. Is it any wonder Christian science and the other cults are thriving?

I asked the attending physicians why they did not empty the uterus, if they could do nothing else? They replied that the question was considered, but they did not believe she could stand the operation. I contend, since they were unsuccessful in controlling the vomiting, and their treatment shows they were short of ideas, they should have given her at least a chance by emptying the uterus. Here was a strong, vigorous young woman, happy in home and with husband, and looking forward with intense delight to the crowning glory of her womanhood, and denied—but I will say no more. I am not putting into this article all the bitterness I feel, but I want to say, that I believe that this case in connection

with Dr. Lyon's article, if read and remembered, will give many a poor woman her chance.

Here, in my judgment, was a simple case of autointoxication, the system was profoundly impressed by the poison, the condition being intensified by eliminations from the child. The vomiting was nature's warning, but it went unheeded. There are none so blind as those who will not see.

Elimination was the one thing that should have been carried out vigorously. A fountain-syringe and a rectal tube would have done more good than anything that was done. It could have done no harm and in all human probability would have cleared up the case by relieving the autointoxication. To a thinking man, and I find the readers of CLINICAL MEDICINE are all thinking men, it is unnecessary to say any more about this case and the way it was handled.

WM. BOYD SECREST.

Gooding, Ida.

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[We print Dr. Secrest's letter for the very reason which he suggests—that it may bring home strongly to every reader the importance of *doing something* in these cases of intractable or pernicious vomiting of pregnancy. The doctor's letter was written under the stress of intense emotion, and therefore he may not have been quite just to the medical men in attendance. It is for this reason that we withhold the name of the city where his sister was sick and died. But on the face of his report he seems amply justified in his criticism. It is likely that any man who had gone through the same experience would feel as he does. I am sure I should.

We can not conceive how any *physician* can treat a case of this kind without being sure of the condition of the excretory apparatus—sure that bowels and kidneys are eliminating properly. As Dr. Secrest points out, autointoxication is *the* vital factor in the causation of pernicious vomiting of pregnancy, and presents the one therapeutic indication that is perfectly clear. The alimentary tract should be flushed, not perfunctorily, but with a thoroughness that can not be questioned; then it should be rendered as nearly aseptic as possible with proper remedies. The urine should be examined, and any abnormal condition corrected. Dr. Lyon showed that in these cases acetone and diacetic acid are frequently present, and the administration of alkalis very often gives complete relief. Why, the whole theory of treatment is based upon the presence of autointoxication in some form or a number of forms.

Who has a word to add?—ED.]

COOPERATIVE HOSPITALS

Will some of your readers who are acquainted with the methods employed to inaugurate and conduct a cooperative hospital, and with the successes and failures of such an institution, please communicate with the undersigned? I wish to learn all about such a system of hospital management.

CHARLES F. ABBOTT.

Elmira, N. Y.

NOTES ON THE SEPTEMBER CLINICAL MEDICINE

Single Large vs. Repeated Small Doses of Physostigmine

The editor wishes me (September CLINICAL MEDICINE, page 941) to tell what effect I get from the 1-12-grain doses of physostigmine which I recommend.

Before answering this, I must admit that I subscribe to and practise the rule of "small doses frequently repeated to effect"; but rules are made to be broken—once in a while. I recommend the 1-12-grain dose of physostigmine for the relief of "wind-colic" to save time and because I find that it takes about five repeated milligram doses to produce the desired effect, and that these 5 milligrams, given together as one dose, have the same effect as when given at intervals, except that the full effect is produced immediately instead of gradually. One milligram is the dose for an infant.

I must admit, further, that giving a single large dose instead of a series of small ones involves the sacrifice of some scientific accuracy in the amount given. Thus 4 milligrams might suffice for one case, while another would be better off with 6 milligrams.

But in some cases the saving of time is worth more than accuracy. Just put yourself in the patient's place for a minute. Colic is no fun when you have it yourself. If *you* were squirming with pain, would you care a snap whether you got a milligram too much or too little, or would you demand relief, and that "immediately if not sooner"?

Having now answered your question, may I respectfully ask two in return?

In the first place, if you have never tried the single large dose in a case of this kind, how do you know that the repeated small doses are "more pleasant"? I have tried both, and my patients prefer the single dose.

In the second place, why do you continue to recommend the anodyne formula for colic when physostigmine is so vastly superior? I do not see how anyone who has fairly tried it can doubt this superiority.

ANODYNE	PHYSOSTIGMINE
If repeated, rapidly forms habit.	Never forms habit.
Dosage has to be increased.	Dosage does not have to be increased unless to meet patient's increasing stature.
A mere palliative.	Relieves pain by increasing peristalsis, and so removing the cause.
Comparatively feeble in effect.	Much stronger effect.

In short, physostigmine is the only satisfactory antidote for intestinal colic.

Phenol Solutions

I have used aqueous solutions of phenol in various strengths, both weak and strong, both with and without glycerin, with the result that I agree with Dr. Cosman (page 945, CLINICAL MEDICINE). They are all dangerous—the weak solutions more so than the strong. For this reason, I have given up using phenol and water together in any shape or form. Dr. Robert Gray's formula has been my standby for several years. I have used it almost daily and have never yet noted any ill effects from it.

Doctor Gray's formula is as follows: Equal parts of phenol crystals, camphor, and chloral hydrate crystals are triturated together till liquefied; then add to it an equal part of olive oil. Any vegetable oil will do at a pinch, but animal and mineral oils are not satisfactory. I think the oil of origanum is an improvement over olive oil. The Abbott antiseptic oil is an elegant preparation, but it lacks the antiseptic strength of Dr. Gray's formula. It is better than Dr. Gray's in cases where the skin is so abraded that Dr. Gray's mixture proves too irritating.

Answer to Query 5846

"Vitiligo." The Christian tribes of the Philippines are very subject to this affection. One meets cases everywhere. I was never called on to treat it, as the natives pay no attention to it, but I met a supervising teacher who claimed to cure it by daily applications of witch-hazel. I saw some cases that were undergoing treatment, and some of these certainly showed improvement. The pigment was returning to the achromatic spots, while the surrounding area of superpigmentation was fading. The line of demarkation was quite indistinct. Was it suggestion?

Aspidospermine

The argument for the large dose applies *a fortiori* to the dosage of aspidospermine in chloroform cyanosis, which I recommended in a former issue, and which was criticized as being too large. When a life is passing you dare not dally with small doses, or that life will soon be beyond your recall.

In this case there is another factor of importance. The aspidospermine antidotes the chloroform, but the chloroform also antidotes the aspidospermine, and the dosage of the latter has to be augmented in proportion. My usual dose of aspidospermine for an adult is 1-12 grain, but in chloroform cyanosis there is no use in fooling with less than 1-2 of a grain repeated if cyanosis returns, as it is very likely to do.

In its toxic effect, chloroform acts like carbon monoxide rather than carbon dioxide. It is absorbed by the blood and excreted by the lungs for hours after the anesthetic is stopped. Meanwhile the antidoting aspidospermine is being excreted too, and is likely to run out before the chloroform does.

Ye wise and good editor is forever preaching "dose to effect" and treatment of every case according to its own indications and *not* by routine methods, and, yet, when I advocate the same principles, I am criticized for not using routine methods in selected cases where other methods prove better.

What say you?

CHARLES F. MORRISON.

Apopka, Fla.

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[Dr. Morrison's counter criticism is a very clean-cut one. But perhaps a few words more of comment are called for by the editor —in fact, the doctor himself has called for them rather strenuously.

First, as to the large dose of physostigmine. I confess that I have never given it in the massive doses which Dr. Morrison likes. Neither have I given strychnine 1-4 grain at a time, though there are people who advise that dosage. I am careful when giving physostigmine, for the same reason that I am careful with strychnine—because it is a very powerful and may be a very dangerous remedy. When a patient is "squirming with pain" due to what is roughly called "colic" it is well to be sure of the cause of that pain before giving large quantities of a remedy that powerfully excites peristalsis and may bring about tetanic contraction of the intestinal muscle. If the "colic" turns out to be the result of appendicitis, intestinal obstruction, ulceration, intussusception or invagination, the result of the medication may be disastrous. Personally, I prefer to give the smaller and frequently repeated doses of this

confessedly valuable alkaloid—doses which I can watch and guard.

This has always seemed "more pleasant" to me as well as more safe—and I have had experience with various dosages. This also explains why I continue to recommend anodynes for colic, that is, because it is safer to put the intestine at rest until one is positively certain that it will do no harm to stimulate all its muscular and glandular apparatus. You can take chances with "colic" in a horse, but not in a human being.

With this introductory explanation, I want to add that Dr. Morrison's experience with physostigmine undoubtedly warrants his admiration for the drug. Perhaps there are others who will tell us how they use, in what dosage, and what are its advantages and what its dangers, as they see them. This is a "free-for-all" discussion.

As to the phenol solutions, we are in the main in accord. Carbolic acid is not a very safe antiseptic, and the weaker the solution (up to a certain indefinite point) the greater seems its danger. It is because surgeons and therapeutists have realized that fact that they have sought equally satisfactory and less dangerous antiseptics like the antiseptic oil.

Has anyone of our readers seen a case of vitiligo actually cured? The witch-hazel (the commercial diluted alcoholic extract, presumably) is certainly so cheap that anybody can try it.

I am inclined to think that the dosage of aspidospermine heretofore recommended has been too small. In this matter I yield gracefully to Dr. Morrison's opinion, especially since he has such a good man on his side as Dr. Solomon Solis-Cohen, who prescribes aspidospermine in asthma, and says that "in every one of its fifty-seven varieties" he rarely meets a case it will not help. Dr. Solis-Cohen employs the crystalline aspidospermine and gives from 1-10 to 1-2 grain every hour or two.

As to Dr. Morrison's final inquiry, we cheerfully confess our sins—providing we can be shown that they are sins. Other things being equal, and especially when we are dealing with very potent drugs, we prefer to give "small doses frequently repeated." However, we are from Illinois—which is just as good as Missouri, any old time!—Ed.]

MATERNAL IMPRESSIONS

I noticed a report by Dr. Frank Jahn, in the July number of The American Journal of Clinical Medicine, referring to a case of maternal impression which came under his observation. A great number of physicians do not believe such occurrences are possible. I am of the opinion that they do occur and will mention several that have come under my personal observation.

1. A woman became frightened at a cow: child was born with head resembling a cow.

2. A woman while working in her garden was frightened at a mole: child was born with hands and feet like those of a mole.

3. A young man went fishing and brought home a small turtle, placed the turtle on the ground in the yard, and called his sister, who was pregnant; saying that he had something pretty to show her. He had his foot on the turtle's back, and as she approached, removed it. The woman screamed and was very much frightened. At the expiration of five months she gave birth to a child very much deformed, approximating the shape of the turtle, and was of idiotic type. It lived ten months.

4. In my office I had, preserved in alcohol, an amputated penis. Naturally, the men of my acquaintance came in and looked at the specimen, and no doubt some of them told their wives. On one occasion during my absence, several ladies, one of whom was pregnant, took a look at the specimen. When confined six months later she gave birth to a well-developed child [male?—Ed.] minus the penis.

From my observations with reference to maternal impressions, I am constrained to believe that they do occur. I should like to have the editor's views on the subject.

M. B. Pollard.

Winnsboro, Tex.

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[The instances cited by Dr. Pollard are all of the *post hoc propter hoc* order and fail to carry conviction. It is only after we are able to exclude other factors productive of these deformities that we could assert with any degree of positiveness that they are due to maternal impressions.

The asserted resemblances to the supposed exciting agents are usually far-fetched, existing mainly in the imagination of those most concerned.

There are thousands of these cases in which no such connection can be shown; furthermore, the whole tendency of biologic thought and the latest revelations of the scientific investigation of heredity seem to prove that these deformities or monstrosities are resident in the germ-plasm, and not the result of environment. Read the works of Plunkett and Davenport.

Can we exclude the *possibility* of maternal impressions influencing the physical character of offspring? No, we can not—and so Dr. Pollard has a right to his belief, even though the teachings of modern science are against him.—ED.]

CHOLERA IN INDIA

In Dr. Waugh's review in the October, 1911, number of CLINICAL MEDICINE no reference was made to the variability in the character and virulence of this disease in different outbreaks and in different periods of the same outbreak.

In the district where I have been for the last twelve years, cholera is practically always present. Naturally, I have made some observations on it. I am convinced that the virulence of the germ varies within wide limits and that, while generally the fatality in the early part of an epidemic is much greater than later, sometimes the reverse is true. This fact (for me it is a fact) largely vitiates statistics.

Within four months I have had the care of patients in two small epidemics, one starting in Midnapore in the month of August, the other in Calcutta. Both were ultimately traceable to Ganges water. In the first, of eight early patients only one lived. Two died within eight hours of the first showing of symptoms, one in fifteen, one in twenty. In the other epidemic, the first patient attacked recovered, though he was in a serious condition for several days. The second patient lived about seventy-two hours. The third and fourth recovered. After this, hardly any of those attacked recovered.

My present treatment is, to hope for the best while I give cuprum, copper arsenite, camphor, strychnine sulphate, strychnine arsenate, and the sulphocarbolates. I try to keep the patient warm with hot-water-bottles and giving hot friction with the bare hands heated over coals. Hot saline rectal injections are of value. If this treatment is conscientiously carried out, fifty percent recover, while, if nothing is done, at least half of them die. The secret in that statement is that the cases that come to me are very much more serious than the average run. Of the patients that come to me, probably eighty percent would die if they received nothing but the usual home care.

As a prophylactic I use cuprum 2x. After attending a case I change my clothes, and bath, hair and all, in a weak carbolic-acid solution. I am especially careful to keep my hands away from my mouth until they have been thoroughly disinfected. I treat all wells where possible with copper sulphate or potassium permanganate.

In closing, I *guess* that: sunshine on clear running water kills the cholera germ quickly, on clear standing water after a longer period, and slowly if the water is muddy; there are germs in much standing water that are inimical to the cholera germ; the germ only exceptionally passes a normal stomach alive; there is an acquired immunity to cholera.

Please, please, pretty please, have Dr. Waugh tell us how to "avoid fear."

A. L. KENNAN.

Lalgarh, Midnapore District, India.

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[I very much fear that there *is* no short cut to the avoidance of fear—yet the physician who has confidence in himself and knows how to inspire faith and courage in his patients can do much.

The suggestion regarding copper is fine, though we should be inclined to use the copper sulphocarbolate. Dr. Cummins's experience with this remedy—and in cholera too—was certainly remarkable.—ED.]

THE STUDY OF SPONDYLOTHERAPY

The American Association for the Study of Spondylotherapy will hold its convention at Chicago, November 12, 13, and 14. The headquarters are Hotel Sherman, City Hall Square. Dr. Albert Abrams of San Francisco will participate at this meeting, delivering his lectures and giving demonstrations on spondylotherapy.

This science, for it is a science as much as any other branch of medicine, is well worthy of careful consideration, The spinal reflexes and their influences upon the body producing or relieving certain diseases are of tremendous importance when thoroughly understood. If there is any good (and there is unquestionably) in osteopathy and chiropractic it is due to the influences of the spinal reflexes. The treatment of bodily ailments, physical or organic, by means of manipulations of the spinal reflexes has passed the experimental stage, and to Dr. Abrams is due the credit of placing spondylotherapy upon a scientific basis. Nearly all of his professional life has been devoted to original observation and experimentation in this line of work.

He has revolutionized the whole method of physical diagnosis, and has evolved methods of treatment by mechanically eliciting certain

reflexes in a way that has revolutionized this branch of therapeutics.

Treatment through the spinal reflexes, however, does not supplant drug therapy by any means, but it reenforces it to a wonderful extent. I advise those who can to avail themselves of this opportunity to attend the first annual convention of the American Association for the Study of Spondylotherapy, and also to take the course which will be given by Dr. Abrams.

GEORGE F. BUTLER.

Chicago, Ill.

THE SEED OF EVE

No wonder Adam ate the fruit
That damned the human race—
There was an Eve, and what could boot
Good sense in such a place?
A man might kiss the Blarney stone
Were all its fables true,
And then as soon as he got home
His wife would read him through.

They can devine, these helpless things;
These "vessels" read the mind;
They'll hear your conscience whispering,
And see where you are blind;
Their sighs are sharper far than words;
In strength their tears abound;
Throughout the earth for deeds or words
They justly are renowned.

Great Solomon, I marvel not
That thou didst grow so wise—
Nine hundred women on the spot
Are not to be despised!
I'd like to know your royal views
On what dressmakers lost you:
And eighteen hundred ladies' shoes,
I wonder what they cost you?

Did they disturb your musing moods,
Your privacy of soul?
And did their yearning hearts include
These things in their control?
Each time thy thoughtful eyes did blink
Nine hundred asked the cause;
Each time thou gave'st a girl a wink
Nine hundred read the laws.

But "all is vanity" you say?
And, yet, you did contrive
To be the idol of your day,
Most-married man alive!
Though age on age has rolled away
Across the sea of time,
Your glories in their bright array
Of matrimony shine.

Ah, lovely fair, your precious eyes
Do queen it, and your frown
Would hurl an angel from the skies—
You'd smile Gibraltar down.
Now, ladies, take the homage due
Six hundred years of rule:
Wherever men have walked with you,
Mankind has been a fool.

ALSON BAKER.

Dreyfus, Ky.

"WASERS, COMERS, AND ISERS"

When you hear a feller tellin' of the big things he has done,
A braggin' 'bout the medals, an' the trophies he has won,
An' showin' his importance, an' swellin' out his chest,
An' makin' you feel only one, with him most all the rest:
You can bet your bottom dollar that there's surely somethin' wrong,
For if you just investigate, it won't take very long
To find out that his banker don't rate him very high,
An' that his wife won't cry a lot, if he should chance to die.

It's just that sort of fellers that will set around an' wait,
Expectin' folks to bring them all the good things on a plate,
An' while the world is movin', they keep livin' in the past,
As if it was appointed that their luck would always last;
When you meet up with that feller, if you trace his record back,
You don't find dust a flyin' in the air along the track;
Then you're safe to make the gamble he's a "has been" gettin' late,
You can classify his species as a "waser" sure as fate.

When you hear a feller shoutin' of the things he's goin' to do,
An' pointin' out the prospects which the future has in view,
An' layin' plans so intricate no architect could beat,
An' buildin' castles in the air, on both sides of the street;
You can set it down in black and white, the music of that tune,
Won't set the world a whistlin', an' most likely mighty soon
His rockets they will peter out, an' end up just in smoke,
An' when the sticks fall with a thud, it all will be a joke.

He's probably the person to get out in the front,
An' while the rest are pushin,' he'll stand around an' grunt,
An' when the work is over, if it happens to be right,
He'll strut around as if he owned all real estate in sight;
But if perchance the scheme fell through, an' didn't make a go,
He'd be the first to set right down, an' say: "I told you so;"
When you classify his species you can fill his label out
As a "will be," may be sometime, an' a "comer" without doubt.

When you see a feller walkin' 'round, an' keepin' mighty still,
An' takin' in the sights an' sounds, an' workin' with a will,
An' doin' all the little things that happen in his way,
An' actin' just as if he liked that very job today;
Just rest assured the time will come when he will find his place,
An' meet some great emergency an' benefit the race,
For the feller that's in practice, will just as like as not,
Have both hands free to grab the chance, like "Johnny on the spot."

He may not be a hero, an' set the world ablaze,
He may not get the plaudits of the people nowadays,
He may not win the laurels, nor wear a kingly crown,
He may not keep from fallin', but you cannot keep him down;
When the "waser" is forgotten in the mist of yesterday,
When the "comer" still is waitin' for tomorrow far away,
You can classify the species of this feller anyhow
Of the twentieth century present, as an "iser" in the NOW.

HOMER CLARK BENNETT.

Lima, O.

THE LIVER AND ITS FUNCTIONS

For years I have been giving special attention to the liver and the relation of its functions to health and disease. As is well known, the therapeutics of the liver has not kept pace with the treatment of other organs. New and better remedies have been found for the heart and kidneys, as well as for other organs, but purgatives are still relied on in treating liver troubles, regardless of the function or functions that may be a fault. "To get bile," has been the chief and only object when applying remedies to that organ. No attempt has ever been made to correct other deranged functions of the liver.

That we may fully understand the liver, every one of its functions must be considered. The *glycogenic*, the *urea-making*, the *bile-making*, and the *antitoxic* are the four chief functions of the liver. These are apart from the gall-bladder functions.

Taking up these special functions of the liver and gall-bladder, let us see what part they play in the physical economy.

The glycogenic function has to do with the preparation of the carbohydrates, after digestion, so that tissues can use this element of food; and when this function is deranged, the tissues become starved and the system saturated with unused food-matter. A water-logged condition of the tissues follows, poor assimilation, nervousness, headaches, and so forth, and all the usual symptoms of an autotoxemia are recognized.

Next comes the urea-making function. Urea stands in the same relation to the kidneys as the bile does to the intestines. Urea dissolves out the waste matter from the tissues and stimulates the excretory function of the kidneys. A derangement of this function is the cause of renal insufficiency. With a low specific gravity of the urine, there is a retention of waste matter, which is a contributory cause of autotoxemia. Often a uric-acid condition is seen, due to an imperfect oxidation of the nitrogenous element entering into the manufacture of urea—uricacidemia.

Another contributory cause of autointoxication is due to a disturbance of the "antitoxic" function—the liver fails to burn up and destroy toxins and other poisonous matter picked up by the circulation.

Purgatives have no effect on the liver. A free discharge of bile is no indication that the liver is acting normally.

I have seen half a gallon of bile discharged from a biliary fistula in twenty-four hours, and yet gallstones formed in less than a month while the liver was discharging this amount and quality of bile. I have seen the bile change from a pea-green, thin fluid of watery consistency to a thick substance of creamy color—and the gallstones cease forming; and have dissolved true gallstones in this same bile from the same patient, and the calculi would form again in, regularly, every thirty days or less.

How shall we correct the liver when not performing its functions?

See that the liver secretes normal bile. This is done by correcting the glycogenic, urea-making, and antitoxic functions. Each should have particular attention. See that the bile is liquefied when too thick. See that the ducts are patulous, by relaxing any spasmodic contraction; and stimulate the gall-bladder to contract normally.

I will say here that the *bile acids* or their salts will dissolve gallstones, and a healthy bile contains all the necessary solvents for gallstones of cholesterin formation.

It is as easy to cure cholelithiasis as it is to cure the old-fashioned chills with quinine.

To have confidence in any treatment, we must realize that every drug is a specific. We must understand the action of drugs—must know our remedies. And right here I beg to say that therapeutic agnosticism is born of ignorance of the physiologic action of drugs.

Show me a physician who is familiar with the active principles and knows the therapeutic effects of the organic remedies, and I'll show you a physician into whose hands any patient with two hundred dollars in his pocket and a pain in his belly would be perfectly safe. I trust that my surgical friends will bear with me when I say that true medicine is making but little progress because of the hue and cry that "there is nothing in medicine" and that the scalpel and trained nurse constitute the only "method" which can relieve that patient of his money. The sun shines only on their own little world.

Too many mistake empiricism for real medicine. If you do not know that a given remedy will do a certain thing, do not give it. Cut out empiricism and practise medicine. This leads up to the real question of what to do in the treatment of the liver—the correction of the different functions of the liver, and the emptying of the gall-bladder and keeping it open. This will have to be a subject of a future paper.

J. A. WINFREY.

Mineral Wells, Tex.

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[While it is perhaps promising too much to offer to "dissolve" gallstones in the human body, clinical experience has shown that these "stones" may be rendered harmless—at least in many instances—through proper medicinal treatment. The purified bile salts certainly powerfully stimulate the hepatic function, and used in connection with sodium succinate they provide the ideal medicinal treatment for this state. Before rushing your gallstone patients off to a hospital to be operated upon, why not try to cure them yourselves? Try these remedies for six months or longer, and report your results.—ED.]

A NEW AND SUPERIOR DIPHTHERIA ANTITOXIN

The Abbott-Slee Laboratories are just on the market with a diphtheria antitoxin which excels all others in the small bulk required to present a large number of units.

This antitoxin occupies only from one-half to one-eighth the volume, unit for unit, of other antitoxins on the market.

Strangely enough, this concentration is secured with a diminution in the percentage of solids, in which particular it is superior to any other antitoxin offered for sale, and more than complies with the proposed requirement of the new U. S. Pharmacopeia.

Minimum bulk makes it possible to give this serum with the least possible inconvenience to physician and patient, while the small percentage of solids insures rapid absorption.

Furthermore, the concentration is so great that even 10,000 units are marketed in a single 5 Cc. vial, so that the entire dose can be administered at a single injection with the physician's own hypodermic syringe, if, upon emergency, it is necessary to do so. However, a novel syringe-container is also provided. Occasionally manufacturers of biologic products find a horse which will develop an unusually potent serum. But this is the exception.

The Abbott-Slee antidiphtheric serum is *all* refined and highly concentrated, and the high authorities on serums who have examined these products have expressed astonishment at the results obtained by Dr. Slee, at whose hand this has been accomplished.

This antitoxin is marketed exclusively by The Abbott Alkaloidal Company (The Abbott Laboratories), Chicago, to whom inquiries and orders should be addressed.

In spite of its manifest advantages the price is no higher than that charged by others for the ordinary products of the market.

VERY SMALL TWIN BABIES

Dr. E. T. Clemens, Dayton, Ohio, in the October issue of CLINICAL MEDICINE reports the birth of a baby weighing only 1 pound and 6 ounces. I find a record in my obstetric book of a similar case, this having occurred in Joplin, Missouri, May 15, 1901. The woman I delivered was a Mrs. John Day and she gave birth to twin girls, one weighing 1 1-4 pounds and the other 1 3-4 pounds. Both babies lived five months, dying on practically the same day. I delivered the same lady again of twins, a boy and a girl, on April 10, 1903. These weighed 5 and 6 pounds, respectively. The parents are both rather below the average size.

WILLIAM LOTHIAN.

Kansas City, Mo.

OBSTETRIC ECLAMPSIA

One form of that serious menace to pregnancy, obstetric eclampsia, is cumulative. A toxemia slowly gets a grip on the expectant mother and its existence may be unsuspected unless the urine is tested for albumin. Much of the toxic material may be urates. If an analysis of urine passed in twenty-four hours,

on several successive days, shows a marked fall below 400 grains of urea, the liver will bear watching. Kidneys which fail to eliminate urea will also prevent other waste products from being removed from the circulation.

Eliminative treatment has as many legs as a centipede. Edema is regarded as favorable in such toxic conditions; because, where it is absent, sudden proof of central-nervous-system poisoning is liable to develop. Headache, pains in various vital locations, tinnitus, drowsiness, deafness, blindness, unconsciousness are familiar parts of the clinical picture.

Delivery usually means a fight for life both for mother and child. Eclamptic seizures may occur at any time. They may make premature delivery necessary. Sudden death a few hours after delivery may terminate the case. The nervous phenomena follow postpartum hemorrhage. In the latter case the cause is likely to be anemia.

This anemia is the phase of the subject which is most suggestive. At term, the convulsions usually precede labor. The uterus plus the placenta contains more blood than any other part of the body. Of course, the blood in the fetus is derived from the mother, but it has been a gradually accumulated savings-bank deposit.

Motion on the part of the child interferes with vital functions because of bulk, while other factors cause blood to be retained in the uterine muscle. The nervous system gets less than healthy nutrition demands. First spasmodic contraction of the uterus is produced. This is followed by chronic spasm of the various voluntary muscles and of some of the involuntary ones.

At this stage, it is necessary to use quick and powerful antispasmodics. In their preferred order they are: morphine, chloral, chloroform, veratrine, lobelia [or lobeline]. Sometimes these drugs used in combination act better than when given alone.

Lately two therapeutic agents have been introduced that have virtues. One is pituitrin, the other is hyoscine-morphine-cactin. The latter is recommended as a relaxant in spasmodic conditions accompanied by pain; but since it is used hypodermically, it acts through the circulation of the blood. It would not have any immediate and powerful eliminant effect, and such an effect is not what will act best at such a time. Quick delivery is desirable.

There may be retention of waste material, which can be partially disposed of by exciting profuse sweating and purgation. Croton oil on sugar or elaterium in honey might fill the bill. Either or both of these methods are employed to abstract as much as possible of the liquid part of the blood.

One supposed cause of eclampsia is hydremia, or an excessive amount of water in the blood. Withdrawal of this water would, in effect, be to furnish the body more condensed food. Probably the accumulation of water in the tissues of the body, or edema, is a relief of the same kind. It is not certain that the toxic causative agent of eclampsia is entirely soluble in the liquid portion of the blood that can be withdrawn by elimination.

Intravenous injection, or, in a pinch, deep muscular injection of normal salt solution is recommended for counteracting the depressant effect of violent elimination. Withdrawal of a quart of poisoned blood by opening a vein, or else of body-fluid by purgation and sweating, should be followed by getting into the circulation a part of a quart, at least, of normal salt solution, which is free from toxic material. If the abstraction of such toxic blood does not cause the patient to die of shock, the injection of the salt solution ought not to be dangerous, especially because the heat it contains would counteract the subnormal temperature.

Pituitrin and adrenalin in combination have a powerful effect on the gravid uterus. Such a therapeutic merger in emesis gravidarum acts as promptly, sometimes, as oxalic acid. Both are increasers of blood pressure and arterial tension, and when given for an obstetric effect alone can be compared to the hare and the tortoise. They do not go fo the root of the trouble in eclampsia; in tact, the action witnessed on a convulsible nervous system is the opposite to what is desired.

Where a large dose of morphine is indicated to ward off or allay a convulsion, it is good treatment to give two full-strength hyoscine-morphine-cactin tablets. Relaxation of the spasmodic condition is demanded promptly. It is uterine asthma which must be combated. Blood must be released from the uterine circulatory apparatus, so that a normal supply can be sent to the central nervous system by the heart.

So many disturbing processes result from the presence of the fetus in the uterus, that relief, by delivery, is the most important item in the treatment of eclampsia at term. Hyoscine-morphine-cactin has an analgesic effect on the sensory-nerve mechanism, quickly manifested by obtunding pain. Other parts of the general and special nervous system have functions separate from

sensation. The remedy, which is injected into the blood, is fed to the nerve-centers and will delay, modify or perhaps prevent the cause of the eclampsia from exerting its effect. The cause is not removable without the birth of the child, but, if an agent will check the progress of a pathologic condition and hasten delivery, it is worth its weight in—babies.

Anemia to a large extent is the cause of the eclamptic predisposition. Well-nourished nonworriers do not usually generate these gestation-storms. At the time of conception the parasite, which, by phagocytic action, introduces a depressant into the mother's blood, is responsible for poor nourishment.

Failure of the stomach to maintain a healthy standard of digestion will cause many kinds of reflex disturbances. Vomiting of pregnancy is not always entirely due to the stomach. That first station on the digestive route might be willing to put up with the inconvenience of pregnancy, but can not maintain cooperation with some other section of the alimentary tract.

An unrecognized duodenal ulcer has been known to be the tap-root of malnutrition leading to the toxemia of pregnancy. Nonspecific inflammatory conditions in the locus of enteric fever can play such a part.

Rejection of food by the stomach is caused by reversed peristaltic motion. The origin of the peristalsis can be in any part of the bowel. Long-continued malnutrition will load the circulation with the products of waste and degeneration, and finally the kidneys hang out the white flag. Albuminuria is a signal for elimination and support. Hot baths, hypodermic medication with pituitrin and adrenalin, and fresh air, to promote oxygenation of the blood, are some of the indications.

A patient frequently can be relieved of the exciting causes of toxemia and brought into fair condition to the ordeal of labor. But a nervous system that has formed the habit of "throwing a fit" under provocation is liable to be upset at the time of childbirth. Serious eclamptic seizures before the child is viable generally call for induction of premature birth. If the pregnancy goes to term and the mother escapes with her life, the child is still-born.

An advantage of such a powerful assistant as hyoscine-morphine-cactin to the obstetrician is this: if he has been warned by experience, during a patient's carrying period, of the possibility of eclampsia, he should use that remedy for prophylaxis.

E. K. FREE.

Billings, Mo.

[We should be inclined to substitute for the two full-strength hyoscine-morphine-cactin tablets, one-half or a full-strength tablet and follow immediately with gr. 1-200 to 1-100 lobeline sulphate. In this way relaxation of the spasmodic condition of the uterine tissues, which is so imperatively called for, can be promptly secured. As the doctor points out the uterine vessels are engorged and it is essential that the surplus blood be released, in order that a normal supply may be sent to the central nervous system. We now know that the hyoscine-morphine combination promptly controls irritation of the nerve terminals and lobeline produces general relaxation more promptly than any other known agent.

Heretofore it has been difficult to use lobelia effectively because of the extreme pain which followed its injection. Lobeline sulphate is entirely free from such objection and gr. 1-100 produces profound relaxation of the entire body. It does not cause nausea or any of the undesirable symptoms which usually follow full doses of lobelia. With hyoscine-morphine-cactin and lobeline sulphate at his disposal, the physician need no longer dread puerperal convulsions.—ED.]

OBSTINATE PRIAPISM

Permit me to submit the description of a case of obstinate priapism that was completely cured by the use of veronal, a drug which, to my mind, deserves a wider use than is generally accorded to it. The use of veronal as a precaution against sea-sickness has already been described in one of the leading medical journals. In my own practice I have found it to be the safest, most prompt and reliable somnifacient, having never seen any ill effects following its administration.

The case in question was that of a young man who had masturbated for several years at the rate of once, twice or thrice a week. He feared his mind was giving way and came to me for advice. An examination of the external genitalia revealed no abnormalities. Circumcision had been performed in early childhood. Prostate gland and testes were normal. The man complained of constipation and insomnia.

After talking it over with him freely, I gave him some medicine to correct the constipation, and veronal, in 5-grain doses, to be taken at night for a period of two weeks. The veronal was discontinued for several days, then resumed for another week, with the addition of small doses of heroin. The

entire treatment occupied one month, and last reports are that the man has not returned to his old habit.

In addition to the foregoing, I enjoined light exercise, especially as the man was a clerk and sat in a cramped position all day. The usual anaphrodisiacs failed to correct conditions and were discarded altogether. I welcome criticism from the brethren as to the merits of the treatment outlined.

L. A. ELMER.

Honea Path, S. C.

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[Sodium diethylbarbiturate has proven most efficacious combined with hyoscine hydrobromide or hyoscyamine. The combination of sulphonmethane, scutellaroid, solanine hydrochloride, and cactin is perhaps even more efficacious. Opiates should never be used in such cases. Dilation of the rectum often proves promptly beneficial; and the patient may advantageously be saturated with calcium sulphide. Almost invariably examination will reveal the source of irritation. In this case, thorough purgation and dilation of the sphincter ani seemed to have been indicated.—ED.]

NEWS NOTES

A Clinic in Defects of Speech and Voice is now in operation in connection with the Nose, Throat and Ear Department, at Rush Medical College. Patients (the poor only) may be directed to the Central Free Dispensary, 1744 W. Harrison St., on Mondays or Thursdays from 2 to 3 p. m.

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THE Farbenfabriken of Elberfeld Company, its officers, and Alfred J. Kepplemann, manager of its Philadelphia office, have been indicted and charged with conspiracy for cheating and defrauding textile manufacturers by giving bribes to their dyers or other employees. The criminal action was instituted by the Standard Hosiery Dyeing and Finishing Company of Philadelphia, who allege that the employees of the company used substances which had ruined the goods to be dyed, in order to put a competitor of the German corporation out of business.

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OF interest to the readers of CLINICAL MEDICINE is the newspaper report of the birth of a baby in New York, weighing twenty ounces. This is said to be the child of Mrs. Mary O'Connor, of 2595 Eighth Avenue, and was delivered by Dr. Charles H. Goldsmith, of Lexington Avenue. The readers of CLINICAL MEDICINE will remember the report in the October number, page 1056, of a child weighing 1 pound 6 ounces, or two ounces more than the New York baby, reported by Dr. Clemens, of Dayton, Ohio. See also the paper by Dr. Lothian in this ussue. The Dayton baby was still alive at the age of six months, while the New York child was not expected to live.

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DR. Lorenzo N. Grosvenor, who from time to time has reviewed new books on diseases of the eye, ear, nose and throat for CLINICAL MEDICINE, has recently left Chicago in order to accept an offer from a small coterie of men in Huron, South Dakota, who have established a cooperative practice. Dr. Grosvenor writes us that he and his four associates comprise two internists, one surgeon and one gynecologist, besides himself as the eye, ear, nose and throat man. They own and run the Huron Hospital, which is an excellently managed and appointed institution. We wish Dr. Grosvenor and his associates all manner of success and feel certain that they will all profit by their cooperative plan.

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PASSED Assistant Surgeon Riggs, of the United States Navy, in the *Military Surgeon* reports a series of cases of paratyphoid fever, occurring on the cruiser Newark, which only ceased when measures were taken to rid the ship of cockroaches. Examination of two of the insects disclosed in their bodies an organism corresponding to the typhoid bacillus. This was in 1904. In 1910, an outbreak of virulent typhoid fever occurred under circumstances precluding all known sources of infection, but finally traced to the brig; this was rid of bedbugs by means of fumigation whereupon no more cases of typhoid fever occurred.

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THE American Association for the Study of Spondylotherapy will hold its first meeting at the Hotel Sherman in Chicago November 12, 13, 14. Dr. S. E. Bond, Richmond, Indiana, is secretary. This association has been developed by the splendid work of Dr. Albert Abrams, whose book on "Spondylotherapy" is doubtless familiar to many readers of CLINICAL MEDICINE.

Dr. Abrams held a course of instruction in this city in August and this course, we are informed, will be repeated during the meeting of this association. Dr. Abrams has done some remarkable work. Those of our readers who can plan to do so will certainly benefit by attending this meeting and course.

JUST AMONG FRIENDS

A DEPARTMENT OF GOOD MEDICINE AND GOOD CHEER FOR THE WAYFARING DOCTOR

Conducted by GEORGE F. BUTLER, *A. M., M. D.*

AMBER has told us of society—the frothy, pithless, snobbish, worthless society—that fosters discontent, wrecks happiness, destroys homes, and puts a premium on a glitter that is as whitewash. She has told us of a society in which one enters, only to become but a nonentity so far as worth to humanity is concerned. She has told us of a society that classifies its members by means of Dun's or Bradstreet's reports.

Brains count, indeed—but they must be brains for finance.

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Society has been divided into three classes, and one has but to poke his nose into the shopping district to learn of this.

Class one, supposedly the leaders of long purse, the models for the imitators, may be found on Michigan Avenue, where certain stores supply their social standing, in the form of garments that only the long purse can give them.

Class two "shops" on the east side of State Street for ideas, and purchases on the west side, where the department stores supply "nearly as good at half the price."

Class three hovers 'round West Madison and Halsted Streets, where tinsel and plated ware and sweat-shop gowns are doled out by gum-chewing maidens that are paid wages insufficient for room rent, and who are told to trust to luck for provender and clothes.

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All the classes are after the same things. Society tickets, in the form of frills and frippery. And if we would learn of the avenues through which the means have come to keep up with the pace set, the squeamish among us would have to use smelling salts, deodorizers and balmacea, while the initiated would retire to the smoking-room to talk it over; for plain tales might be told that would startle by their boldness.

Money is the motive-power of all these stores, for it is upon this that they are fed. Like leaches, they suck at the wages of the great mob, alluring them, as a frog is enticed by a bit of red flannel, into buying—far beyond their power to buy—the multitudinous objects they are taught to wish for but do not need.

Of peacock inclination, the majority of women (and men, too) judge themselves and their neighbors by the clothes they wear; and so degenerate has the ability to estimate become, that the attractive is the flashy and the imitated are the brilliantly plumed.

To this, then, do the shop-keepers cater, and perverted appetites of the shoppers are fostered by every possible morsel of merchandise that can be produced.

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If the state of the purse—the income through legitimate channels—limited or cut off the purchasing power, all would be well. Then people would content themselves with their needs and with the luxuries and pleasures they could legitimately afford. But temptation for things just beyond the reach is too great, while, unfortunately, the ease with which the breach may be covered is altogether too great for resistance for the conscience that desire makes so flexible.

Should we go back a few years and live as those who have really given progress to the world, what a revolution there would be! Should we dress in the simple, unostentatious way of those whose thoughts are above the rabble, whose minds are capable of greater things than the discussion of latest fashions and silk linings, what an evolution there would be!

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Rid us of "fashions" and "styles," and we shall be rid of idleness and crime, for the mind will be towed into channels where the current of life will run so deeply that there can be no foam on the surface.

Rid us of the temptations to buy the things that our neighbors buy because their neighbors have them, and we shall live more nearly honest lives.

There will be fewer department stores with their crime-provoking wages. There will be small excuse for smoking parlors, opium joints, French restaurants, palm gardens, for all the many other rendezvous for a growing class

of young men and women, there to squander wealth, to idle away precious time in riotous living, to become initiated into immoral ways.

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And it seems to me that there is another element among us whose lives might be better lived if there were in them deeper thought for the true and less regard for the superficial.

To go into details a bit for the purpose of illustration, just consider the learned professions.

The clergyman, although generally, as a class, short on practicability, has an eye on the main chance, and in seven cases out of ten holds fondly the hand of his wealthy parishioners, cutting and drying his sermons with greatest caution so that they may not offend the ear of the plutocrat in the front pew. He will preach at 2.10 clip in the little village meeting house, but there is concealed in his breast a secret hope that his sermons will lead him to the great stone church in the city, its large salary, and its social environment.

Custom makes this perfectly proper, and the preacher is not to be condemned or criticized for his ambition to live on Easy Street, with its pink teas and chrysanthemums. He knows, as do we all, that his best work would be done in the frame meeting house or the dingy little settlement in the slums, where he could preach good "stuff" without feeling it a matter of policy prudently to clip it of all its real worth and vigor.

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Then take a look at the physician. The doctor is perhaps as good an example as we can find of the man who does the best he can; of a man living in accordance with his precepts and conscientiously attempting to do good where'er he serves. Assuredly, it profits him to do the best he can, for only in this way can he attain to or establish the reputation for which he is striving—his capital in business. But there is no canting sham or driveling hypocrisy about him. His work does not call for such rot, nor would it profit him. It is his skill, his intellect, his depth that counts.

But even in the ranks of the physician there is the tendency to hobnob with the glitter, and there often is evidenced unconcealed joy and a heavy chestiness when a call comes to attend a member of Mr. Goldbag's family. It gives him what he is pleased to call "prestige," and there is led to his door the host of imitators who employ him because of this fact. It is creditable sagacity on his part, and in nine cases out of ten he is as conscientious and as earnest in his efforts to save the pauper as he is to save the gold-filled specimens of mankind.

Only when the doctor stoops to toady is he shorn of the virtue of dignity, for he is the confessed cad, who would sacrifice himself for the dollars that might come to him.

What can be said in praise of a clergyman who would cater to the whims of his rich parishioner by conducting elaborate funeral services over the body of a pet poodle? Yet this has been done in New York City by three clergymen, any one of whom would have felt insulted had the poor of the back-seats requested like services of them.

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And of lawyers? What can be said in praise of them, or of that vast majority of them who stand like hungry whelps, with jaws agape, looking wistfully for a bone to be thrown out for picking? Their true, sublime office is to see that laws are lived up to, that the persecuted are protected, that justice is done. But what a thinning in the ranks there would be were there no purse-strings to be untied! And what a diminution of "injustice" there would be were lawyers relegated to humane work!

Make a misstep on an uneven sidewalk, and fall; clumsily unload yourself from the moving trolley-car and receive a bump for your carelessness. Your conscience tells you to pick yourself up, rub off the dust and go about your business like a man. But a lawyer is at hand, to whisper a word of warning. You must lie still where you fell, must be picked up by a hireling who is "onto his job," must be coached by a trusted physician and the scheming lawyer to be "very ill"; for there's a suit on hand—a job for him, extra fees for the M. D., and a handsome little nugget for yourself!

"What will a man do for money?" Ye gods! He would sell his soul, and with the proceeds buy a tin whistle, or the equivalent, a passport into society, that he might play the ape to those who, though possibly his intellectual inferiors, are placed by himself above himself—on a rickety and insecure pedestal.

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In the absence of any method for determining quantitatively the resultant action of a drug, how are we to proceed? We must content ourselves with qualitative methods, and with the recognition that the influence which we are employing is on

the hither side of that line which separates therapeutic action from toxic action. The chemist in his testings is wont to make use of a reagent that is very sensitive to that particular condition which he desires to maintain during his experiment; and it is thus that by litmus or other color-indicator he determines a required alkalinity or acidity and is able to maintain with precision the one or other state.

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Borrowing from the chemist's methods, we shall seek to discover which of the organs or tissues is most sensitive to the influence of a given remedy and can earliest inform us, by the nature of its response, whether the remedy is acting favorably or unfavorably upon it. Such organ will give us the danger-signal and so lead us to reduce or stay administration upon its appearance. This method might be called the indicator method; and, indeed, it is largely employed in medicine, both consciously and unconsciously, although scarcely as consciously, as systematically, and as critically as it should be.

In another way it is possible to make use of the indicator method, but this time it is not the more sensitive, but the more refractory, organ which we shall select. When we employ this variant the organ chosen is of more vital importance, and we are content to ignore more or less the action upon other less vital parts. Upon this latter method the anesthetist relies, and by its means he suppresses fearlessly function after function until life is reduced to a "little flesh and breath," the "ruling part" having long since taken its departure. Here the response of the centers in the vital knot absorbs wholly the administrator's attention; all else he ignores.

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Upon the former method many physicians, using the renal system as an indicator, control the administration of digitalis, the dose of which they maintain or push as long as there continues a free secretion of urine. In like manner the action of arsenic is controlled by the symptoms of irritation that are prone to appear in the alimentary tract, conjunctiva, and skin, all of which are sensitive to the drug. Upon this plan, also, it was customary to administer mercury, in the days when this metal was employed in more heroic fashion than now prevails; the doses of the mercury being advanced until a specified degree of stomatitis was induced, as measured by the quantity of saliva collected.

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That the indicator method should be used consciously and systematically is clear, but it is no less clear that it must be used with great discrimination, since all organs do not speak with the same authority in the council of members. Thus it would be folly to place upon the same footing a dyspnea or syncope on the one hand, and a conjunctival irritation or a pigmentation of the skin on the other; and we may judiciously overlook a pronounced symptom in an organ of secondary importance in favor of a less obtrusive symptom occurring in an organ of the first rank. Dr. Murray, of Newcastle, counsels wisely, therefore, when he advises that an epileptic refractory to the more usual methods of treatment should run the risk of an argyria, provided that the nervous symptoms bid fair to yield to a course of silver nitrate—to exchange a clouding of the mind for a darkening of the skin is surely profitable barter.

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Without pursuing this matter further, it is necessary to add that the indicator which has proved reliable in the rule, may not prove so in the particular, and that, while average results must always initiate our therapeutic measures, these will ever have to be controlled or modified by close observation of the individual; also that as a general rule it is not safe, except perhaps in crises, to concentrate attention upon the functions of a single organ, to the exclusion of those more general aspects of the body which must always be paramount.

(*To be continued.*)

CLINICAL CONGRESS OF SURGEONS OF NORTH AMERICA

The third annual session of this great Congress, which was created three years ago, through the energy of Dr. Franklin H. Martin and Surgery, Gynecology and Obstetrics, is to meet in New York City, November 11 to 16. The headquarters are to be at the Waldorf-Astoria.

The clinics this year promise to be exceptionally remarkable in every way, and there is no doubt that every physician interested in surgery will find the whole meeting invaluable to him.

AMONG the BOOKS

WILLIAMS' "LABORATORY METHODS"

Laboratory Methods: With Special Reference to the Needs of the General Practitioner. By B. G. R. Williams, M. D., assisted by E. G. C. Williams, M. D. With an introduction by Prof. Victor C. Vaughan. Illustrated with forty-three engravings. St. Louis: The C. V. Mosby Company. 1912.

This guide on clinical-laboratory methods is different in so far as it is intended particularly for general practitoners. It attempts to make good its claim for practicability and efficiency as well as service to the general practitioner by eliminating from the start all unnecessary "frills," keeping down the equipment to the simplest necessities, and suggesting such substitutes of apparatus that may be found in any household—certainly in any hardware store—as may suitably replace more expensive fixtures and apparatus for which instrument-houses charge fancy prices.

The authors take up seriatim all the different examinations a physician may find desirable to make, such as sputum examinations, searching for germs, examination of the gastric juice, examination of the blood, detection of poison, examination of urine, milk, water, feces, etc. Even a simple method of finding the treponema pallida is suggested and a technic for carrying out postmortem examinations is given. The directions for the several methods described are given in simple language and the reviewer is convinced that with the aid of this very useful guide any practitioner who will take the trouble to study the principles of pathology will be enabled to make most of the laboratory examinations that he may require.

It goes without saying that here, as in all other things, practice makes perfect, and at the start many a physician will fail to find what he is searching for; but, with conscientious and persistent effort, Dr. Williams' book will enable him to become an efficient laboratory worker, able to determine many points of value in diagnosis and in treatment which otherwise would either be left unsolved or would entail a considerable expenditure of laboratory fees.

We recommend Dr. Williams' book cordially to our readers, and wish it the success that it richly merits.

AN IMPORTANT VETERINARY WORK OF INTEREST TO PHYSICIANS

The reviewer has recently had occasion to examine at some detail a veterinary work which is being published in the English language and which had originally appeared in German, namely, "The Special Pathology and Therapeutics of Diseases of Domestic Animals," by Professors Hutyra and Marek, both of whom occupy important chairs at the Royal Veterinary College in Budapest.

This work, which was published in two volumes of about 1100 pages each, was accepted very favorably in all German-speaking countries. It soon was translated into Italian and Russian, and has been introduced in most of the important veterinary colleges as a textbook.

For physicians, the principal interest in this work centers in the first volume, which deals with the infectious diseases of domestic animals. It gives at considerable detail the course of investigations and their results in regard to the causation, symptomatology, pathology and treatment of infectious diseases; and, since most of these are transmissible from animals to men, it goes without saying that a careful and detailed discussion of the problems presented by these diseases needs must afford much information to physicians.

In the discussion of the organic diseases, also, the reviewer has found much that was of value and that elucidated some problems which he had pondered over for some time. The work is very complete. The English translation was made by a number of American and English veterinarians and physicians and the work occupied nearly a whole year. The first volume of the work, which is just about to be put on the market, forms a beautiful large-octavo volume, and this will soon be followed by its conpanion volume. It is understood that the price of the set is placed at $15.00.

The reviewer takes pleasure in recommending this work cordially. It should have a far greater vogue than merely among veterinarians. Physicians will find much in it that not only is interesting, but important and valuable, and they can not go wrong by subscribing for this work. It can be obtained through our book department.

MEDICAL CLASSICS

In his paper on some German publications (CLINICAL MEDICINE, November, 1911) THE REVIEWER mentioned a series of medical classics published by Johann Ambrosius Barth, of Leipzig, under the editorial supervision of Professor Karl Sudhoff. Mr. Barth had the kindness to transmit the following booklets, in addition to those already announced; viz:

William Harvey: Die Bewegung des Herzens und des Blutes. (1628.) Price Mk 3.20.

Joh. Christ. Reil: Von der Lebenskraft. (1795.) Price Mk. 2.80.

H. von Helmholtz: Beschreibung eines Augenspiegels. (1851.) Price Mk. 1.20.

Thomas Sydenham: Abhandlung über die Gicht. (1681.) Price Mk. 1.80.

Edward Jenner: Untersuchung über die Ursachen und Wirkungen der Kuhpocken. (1798.) Price Mk. 1.20.

Albrecht von Gräfe: Heilwert der Iridektomie bei Glaukom. (1857–62.) Price Mk. 2.00.

Razes: Ueber die Pocken und die Masern. (About 900 A. D.) Price Mk. 1.20.

Charles Bell: Idee Einer Neuen Hirnanatomie. (1811.) Price Mk. 1.50. This little treatise of Bell's, which is indeed a classic, is published here in both languages, English and German.

Adolf Kussmaul: Ueber die Behandlung der Magenerweiterung Mittels der Magenpumpe. (1869.) Price Mk. 2.00.

Leopold Auenbrugger: Neue Erfindung Verborgene Brustkrankheiten zu Entdecken. (1761.) Price Mk. 1.50. This is the first account of the examination of the chest-organs by percussion.

X. Bichat: Physiologische Untersuchungen über den Tod. (1800.) Price Mk. 3.20.

Joseph Lister: Erste Veröffentlichungen über Antiseptische Wundbehandlung. (1867–69.) Price Mk. 3.60.

Ign. Phil. Semmelweis: Aetiologie, Begriff und Prophylaxis des Kindbettfiebers. (1861.) Price Mk. 3.60. Semmelweis was the first to insist upon the infectious nature of puerperal fever. He was hooted "out of court" by his jealous colleagues and lost his mind.

Robert Koch: Die Aetiologie und die Bekämpfung der Tuberkulose. (1887–89.) Price Mk. 2.00. This is one of the most important contributions to literature that have ever been published. Its reproduction by Mr. Barth was a highly commendable undertaking.

Thomas Addison: Die Erkrankungen der Nebennieren und Ihre Folgen. (1855.) Price Mk. 1.50.

It will be seen from the titles that in Germany there exists a lively interest for medical history. Not only German contributions, but also those of French and English writers have met with deserved appreciation in this series of classics. Of course American and English physicians will prefer to read English articles in the original, but the collection contains much that is of interest to physicians the world over.

Of great interest are, finally, the following:

Sanitätsrat Dr. Jessner's Dermatologische Vorträge für Praktiker. Wuerzburg: Curt Kabitzsch.

Hautveränderungen bei Erkrankungen der Atmungsorgane. Heft 22, 1911. Price Mk. 0.90.

Die Praktische Bedeutung des Salvarsan für die Syphilistherapie. Heft 23, 1911. Price Mk. 1.80.

Hautveränderungen bei Erkrankungen der Leber. Heft 24. 1912. Price Mk. 0.60.

These little pamphlets afford much valuable information to the general practitioner on skin lesions due to other diseases, and on other affections of the skin.

MURPHY'S "SURGICAL CLINICS"

The Surgical Clinics of John B. Murphy, M. D., at Mercy Hospital, Chicago. Published bimonthly by W. B. Saunders Company, Philadelphia. Volume I, Nos. 3 and 4. June and August, 1912. Price per year, paper, $8.00; bound, $12.00.

"THE SEX PERIL"

The Sex Peril. A letter from a physician to his son in college. Seventh edition. New York: The American Medical Publishing Company. 1912. Price 25 cents.

American Medicine has published a little pamphlet bearing the above title, which purports to be a letter from a physician to his son in college and discusses in a dignified

and common-sense manner most of the questions that may properly be included under the heading. The language is simple and direct and might easily be just what it pretends to be, a letter from a well-informed physician to his son. It is just the sort of pamphlet that might be given to a young man in high school or in college. Our readers are advised to send for a copy and to obtain quotations of prices in quantities.

"PAPERS FROM THE MAYO CLINIC"

Collected papers by the staff of St. Mary's Hospital Mayo Clinic, Rochester, Minnesota. 1911. Philadelphia: W. B. Saunders Company. 1912. Price $5.50 net.

This latest volume of contributions to current medical—or, better, surgical—literature from the staff of the brothers Mayo contains the papers that were published during the year 1911. It forms a splendid volume of 603 printed pages and contains a wealth of information. The reader is referred to the review in the February number of CLINICAL MEDICINE.

BOOKS RECEIVED

The Blood: A guide to its examination and to the diagnosis and treatment of its diseases. By G. Lovell Gulland, B. Sc., M. D., and Alexander Goodall, M. D. With 16 text illustrations and 16 colored plates. New York: E. B. Treat & Co. 1912. Price $5.00.

Blood Pressure: Technic Simplified. By W. H. Cowing, M. D.: Rochester, N. Y.: The Taylor Instrument Companies, 1912. Price $1.00.

Golden Rules of Diagnosis and Treatment of Diseases. (Medical Guide and Monograph Series.) Aphorisms, observations, and precepts on the method of examination and diagnosis of diseases, with practical rules for proper remedial procedures. By Henry A. Cables, B. S., M. D. St. Louis: The C. V. Mosby Company, 1911. Price $2.50.

Landmarks and Surface Markings of the Human Body. By L. Bathe Rawling, M. B., B. C. With 31 illustrations. Fifth edition. New York: Paul B. Hoeber. 1912. Price $2.00.

The Practice of Medicine, With Especial Reference to the Use of Active Principles and Other Definite Methods. By W. F. Waugh, M. D., and W. C. Abbott, M. D. Second edition, revised and greatly enlarged. Chicago: The Abbott Press. 1912. Price $5.00.

The Principles and Practice of Medicine. Designed for the use of practitioners and students of medicine. By Sir William Osler, Bart., M. D., F. R. S. Eighth edition, largely rewritten and thoroughly revised with the assistance of Thomas McCrae, M. D. New York and London: D. Appleton & Co. 1912. Price $5.50.

Practice of Medicine. (The Epitome Series.) A manual for students and practitioners. By Hughes Dayton, M. D. Second edition, revised and enlarged. New York: Lea & Febiger. 1912. Price $1.00.

A Textbook of Practical Therapeutics, with especial reference to the application of remedial measures to disease and their employment upon a rational basis. By Hobart Amory Hare, M. D., B. Sc. Fourteenth edition, enlarged, thoroughly revised, and largely rewritten. Illustrated with 131 engravings and 8 plates. Philadelphia and New York: Lea & Febiger. 1912. Price $4.00.

Manual of the Practice of Medicine; prepared especially for students. By A. A. Stevens, A. M., M. D. Ninth edition, revised. Illustrated. Philadelphia: The W. B. Saunders Company. 1911. Price $2.50.

Duodenal Ulcer. By B. G. A. Moynihan, M. S. (Lond.), F. R. C. S. Second edition, enlarged. Illustrated. Philadelphia: The W. B. Saunders Company. 1912. Price $5.00.

Emergencies of General Practice. (Oxford Medical Publications.) By Percy Sargent, M. B., B. C., and Alfred E. Russell, M. D., B. S. London: Oxford University Press. 1910. Price $5.50.

Clinical Symptomatology; with special reference to life-threatening symptoms and their treatment. By Alois Pick and Adolph Hecht. Authorized translation under the editorial supervision of Karl Konrad Koessler, M. D. New York: D. Appleton & Co. 1911. Price $6.00.

Scientific Features of Modern Medicine. (Columbia University Lectures.) By Frederic S. Lee, Ph. D. New York: The Columbia University Press. 1911. Price $1.50.

Manual of Fevers. By Claude Buchanan Ker, M. D., F. R. C. P. London: Oxford University Press. 1911. Price $2.50.

Principles of Clinical Pathology. A textbook for students and physicians. By Dr. Ludolf Krehl. Authorized translation from the fourth German edition by Albion Walter Hewlett, M. D., with an introduction by William Osler, M. D. Second edition. Philadelphia: The J. B. Lippincott Company. 1907. Price $5.00.

(*To be continued.*)

CONDENSED QUERIES ANSWERED

PLEASE NOTE

While the editors make replies to these queries as they are able, they are very far from wishing to monopolize the stage and would be pleased to hear from any reader who can furnish further and better information. Moreover, we would urge those seeking advice to report their results, whether good or bad. In all cases please give the number of the query when writing anything concerning it. Positively no attention paid to anonymous letters.

QUERY 5855.—"Removal of Warts and Tattoo Marks." J. R. S., Indiana, wishes to know how to remove warts and tattoo marks. Warts will yield to the following procedure:

Soak the wart with a concentrated solution of magnesium sulphate several times a day (1 or 2 grains should also be taken internally four times a day). An excellent application is: chloral hydrate, ozs. 1 1-2; acetic acid, ozs. 1 1-2; salicylic acid, dr. 1; ether, dr. 1; collodion, ozs. 4. Apply with brush once daily.

Tattoo marks and powder stains can be removed, if the operator takes pains. Success often depends upon the depth of the marking, age of tattooing, and the pigments used. Some of the blue and scarlet marks frequently found upon sailors (tattoing done abroad) cannot be removed without too free removal of cuticle.

Variot, of Paris, removes tattoos as fol lows: "Apply to the skin, under antiseptic precautions, a concentrated solution of tannin, and work it in as in the tattooing operation. Then rub the skin with a pencil (or solution) of silver nitrate until the tattoo marks stand out as black points on the silver tannate. Excess of fluid should be removed. The surface turns black and moderate inflammation follows. In fourteen days, the eschar drops off, leaving a red superficial cicatrix, which fades in seven or eight weeks. This plan is safe and sure—but painful and tedious."

Ordinary slight tattoo marks (powder marks, etc.) often may be removed by pricking in hydrogen-dioxide solution. Under ethyl-chloride anesthesia (local), go over the area affected with a bunch of fine cambrick-needles tied with silk and dipped in glycerole of papoid. To make the latter, take of papoid, gr. 1; water, dr. 1; glycerin, drs. 3; dilute hydrochloric acid, gtt. 3. This is also successful. After thoroughly puncturing the tattooed area, wipe off the blood and apply the fluid on gauze and bandage. Repeat the process if necessary. Do a part of the marked area at a time. Or, also: Tattoo well over the mark with a needle dipped in a solution of zinc chloride, 30 parts, in distilled water, 40 parts. The eschar drops off in two weeks; then dress the area with simple cerate.

The fact that the insoluble substances which are used in tattooing become encapsulated explains the difficulty experienced in their removal. Under the microscope, excised portions of tattooed tissue show large particles of pigment situated in part in the corium, but more generally in the subcutaneous connective tissue itself. Carbon (charcoal, India ink, lampblack, etc.) in some form is used for the black markings, and cinnabar, carmine, indigo or prussian-blue for the other colors. If infections occur at the time of tattooing, the staining may become positively indelible without an extensive plastic operation.

The use of the punch (for small marks just as may be caused by explosions of powder, etc.), sharp-pointed knife or needle will be known to you, of course; so, also, will be the electric needles. Here the needle is attached to the negative pole of a battery, with a current of from 2 to 10 milliamperes, and inserted at various points about the periphery of the stained area, till reaction is marked enough to insure destruction of the involved tissue. The dry superficial eschar falls in a few days. Then the process may be again employed over the adjacent skin.

In all cases strict cleanliness during and after the operation is essential to success. Perhaps the best methods are those described first—the tannin and silver-nitrate process (Variot's) and Ohmann-Dumesnil's glycerole of tannin solution. Let us know how you succeed.

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QUERY 5856.—"Permanence of Alkaloids in Solution." J. H. W., Illinois, propounds

this question: "If an alkaloid is dissolved in water, alcohol or other medium, under careful aseptic conditions, and kept airtight and free from contamination, how long will it keep its strength without any disintegration? For example: 1-4 grain of morphine sulphate in solution, placed in a container hermetically sealed; for how many months or years will that solution represent therapeutically 1-4 grain of morphine sulphate?"

It is impossible to estimate accurately the length of time an alkaloidal solution will remain permanent. It is a known fact that solutions of morphine sulphate hydrolize and deposit a brown precipitate within two years. Quite lately we read an account of a sterile solution, enclosed in an ampule, decomposing within six months from the time it was made.

There is no doubt in our mind that alkaloids in solution will decompose sooner or later, the time-limit varying according to the nature of the alkaloid and character of solvent.

As the alkaloids themselves are practically unchangeable, it is rarely desirable to prepare such solutions which are to be kept for any length of time. A very much larger quantity of the alkaloid can be carried in the space required for the solution and freshly prepared solutions are always preferable to old ones.

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QUERY 5857.—"Stricture of Esophagus From Drinking Lye." M. J. M., Kansas, writes: "What would be your line of treatment and when should treatment be begun for stricture of esophagus, in a child fifteen months old, caused by drinking lye? Does the fact that stricture shows early make the prognosis more grave than where it appears later—say, three months after swallowing the lye?"

As you are aware, cicatricial strictures caused by corrosives make their appearance usually at a comparatively early date, especially in children. The extent and location of stricture in the case are unknown to us and procedures to a certain extent will, of course, depend thereon. The pathology doubtless is thoroughly understood by you: initial injury, subsequent inflammatory reaction, healing by granulation, and the production of a firm fibrous cicatrix, the breadth and extent of which depend upon the original lesion.

The symptoms vary with the progress of the disease. As the lumen of the gullet contracts, difficulty in swallowing is experienced. This may increase until liquids fail to pass; but the tube distends above the stricture and sacculation ensues. The caliber of the tube increases gradually until quantities of food find lodgment. These are from time to time expelled by the patient.

The first step in the treatment is to ascertain the extent of the stricture. Olive-tipped probangs are used for this purpose, but great care must be taken in making the exploration. One is continually hearing of operators passing instruments through the wall of the esophagus into the trachea, the mediastinum, and even into the aorta. If the stricture permits passage of a probang, flexible bougies may be used as dilators. In this way, most strictures may be materially enlarged and the esophageal lumen maintained comfortably open. The occasional passage of the bougie is, of course, necessary, as the stricture is liable to recur unless watched and treated occasionally.

Very narrow strictures may be treated by Dunham's method, in which the stricture is sawed through with a thread: a guide-bougie is passed, an olive-tip, especially constructed, follows and engages in the stricture. Over the olive a stout thread stays. This is pulled back and forth until it cuts a way for the instrument itself, which is pushed on into the stomach. In very tight strictures, which will not permit the passage of a guide, a preliminary gastrostomy must be done and the artificial opening kept open until the secondary operation is performed.

As you will readily grasp from the above, the treatment of stricture of the esophagus in most instances is distinctly surgical, and even in cases where minor interference is necessary, a skill, gained only by experience, is requisite on the part of the operator.

We suggest, doctor, that you send your little one to a hospital. Thiosinamin (or fibrolysin) have proven of very little service in these cases. They may be tried, however, in cases where the demand for relief is not imperative.

You will find a very excellent article on stricture of the esophagus in Mumford's "Practice of Surgery."

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QUERY 5858.—"A Tenacious Tenia." J. M. J., Florida, reports the case of a little girl who has received full doses of extract of male fern and chloroform with castor oil at three different times, the medication, on each occasion, resulting in the expulsion of a foot or so of tænia saginata. The child now vomits at the very sight of the mixture and the doctor is anxious to learn of some

other unobjectionable but effective preparation sure to dislodge this squatter.

We should go after this tapeworm with the old-fashioned pumpkin-seed paste, which, of course, you know how to prepare. To this you may add advantageously 1-2 grain of koussein. Two hours after giving the last dose of pumpkin-seed, exhibit castor oil in hot milk. If the worm is not voided entire within two hours, order a copious enema of salt water, throwing into the bowel first 4 ounces of olive oil with 10 drops of oil of turpentine well mixed in. This is floated up upon the salt water. The bowels should be gently massaged while the fluid is in the intestine. Very rarely indeed does this procedure fail to give the desired results.

Frankly, we do not understand how the teniacide failed to evict the parasite. The mixture you used is, as you know, successful in ninety-eight cases out of a hundred. In fact, most of the "failures" reported prove upon investigation to be due to the absence of the worm or improper technic.

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QUERY 5859.—"Anal Fissures." J. W. S., Texas, has a patient of 42, afflicted with a fissure of the anus. He was operated upon thirteen months ago for "piles" and during the operation the doctor found there was a fissure, but thought it would disappear. It did not, and so he operated again three months later, "cutting the fissure out altogether." The patient thought he was getting all right, but the trouble has returned as bad as ever. A prescription that might benefit or cure is requested.

We find it a little difficult, with our limited knowledge of local conditions generally, to make any positive suggestions. A simple fissure will disappear in most cases if the sphincter ani is dilated and the floor of the fissure painted with a solution of nitrate of silver every second or third day. In some cases, it is desirable to incise the floor with a sharp bistoury. In every instance, constriction of the sphincter must be corrected.

Pain may be relieved by the application of iodoform in a good antiseptic oil or by suppositories of cacao-butter, extract of belladonna, extract of hyoscyamus, and orthoform. An ointment containing hydrastin, orthoform, bismuth, and thuja, applied freely, usually proves effective.

But palliative treatment is not desirable, if the patient can be prevailed upon to submit to thorough dilatation. Gradual dilatation may, of course, be tried with hard-rubber dilators (sets of which can be procured from any druggist), but we prefer forcible dilatation, using the thumbs in place of an instrument. The patient is first given a copious enema, to empty the lower bowel. Then he is placed on the table and, after the first-stage anesthesia is produced with chloroform, ether or ethyl chloride, the operator's lubricated thumbs are introduced carefully and the sphincter is dilated, the muscles being first stretched anteroposterially, and subsequently toward the ischia. Dilatation should be done slowly and continued until resistance ceases. If subsequently the fissure is cleansed thoroughly, dried, then painted a few times with silver-nitrate solution of 20 percent, it will probably disappear.

As pointed out, however, in old-standing cases, incision of the floor is desirable. In some cases, the fissure will be found to lead to an ulcer just beyond the internal sphincter. Such ulcer should be curetted and treated with a silver-nitrate solution. The parts must be cleansed thoroughly and diligently kept clean. In some cases carbenzol works beautifully. It may be applied pure to the fissure once daily and a carbenzol suppository inserted upon retiring and after stool. Cure may be expected in from one to two weeks in a large proportion of cases.

We are quite sure that forcible divulsion and the application of silver-nitrate solution, pain being temporarily relieved by the use of orthoform and suppositories, will give satisfactory results in this case, provided that ulcers of the rectum do not coexist.

Treatment in such cases depends upon the character of the trouble. Ulcers may be somatic, syphilitic, dysenteric, tuberculous, catarrhal or rodent. Naturally, in syphilitic and tuberculous individuals, systemic treatment is essential. Somatic, or catarrhal, ulcers usually cause little trouble, if intelligently treated.

Instruct the patient to flush out the rectum with decinormal salt solution, then throw into the bowel a mixture of 1 part of fluid hydrastis and 2 parts of water, or of equal parts of aqueous extract or calendula and fluid hydrastis and 3 parts of water.

The patient should come to the office once or twice a week at first, and later once, for an application of silver-nitrate solution.

The writer has had some excellent results in stubborn cases from curetting and applying pure carbolic acid, and neutralizing in one minute with alcohol, then painting with medicinal oil of turpentine. A carbenzol suppository or one dram of an oily solution of thymol iodide should be inserted.

We need not call your attention to the necessity of keeping the bowels freely open.

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QUERY 5860.—"Facial Neuralgia." H. Y. N., Pennsylvania, desires information as to the successful treatment of neuralgia on one side of the face, affecting the fifth nerve. Also for pleurodynia and intercostal neuralgia, in a case of which latter he has been unable to relieve the patient.

In very many instances, facial neuralgia is due to an underlying acidemia and in order to relieve the condition it is essential to correct this derangement of the body-chemistry. This writer is in the habit of using, locally, methyl salicylate and guaiacol after the application of compresses wrung out of a very hot solution of epsom salt. Any oral, nasal or aural disorders found must receive attention. Quite frequently a sinusitis may be at the bottom of the trouble. As, of course, you are aware, some tics are extremely rebellious; also, a predisposition exists in certain individuals, especially those of a neurotic or cachectic type. Mental and physical depression is capable of bringing on paroxysms, and, if one nerve of the face is affected, sooner or later neighboring nerves or those of the opposite side will be affected. Unquestionably, however, the majority of neuralgias will be found to be dependent upon autotoxemia; still, it must not be forgotten that a degeneration of the posterior roots of the involved nerve is apt to exist.

Thus it will readily be seen that it is impossible to lay down any specific treatment that will apply in all cases—the individual must be studied.

First and foremost, secure thorough elimination. Give calomel, 1-6 grain; or blue mass and soda, 1-2 grain; podophyllin, 1-6 grain; irisoid, 1-6 grain; half-hourly for four to six doses a night. Follow with a copious laxative saline draught the next morning upon rising. Every two or three hours give sodium sulphocarbolate, 2 grains; or, if intestinal conditions warrant the use of the larger dose, give 10 grains or the three sulphocarbolates, dissolved in water. Regulate the diet carefully. Before each meal exhibit juglandoid, gr. 1-6; boldine, gr. 3-67; and, after food, papayotin, with pancreatin and bilein, if intestinal indigestion is a feature.

Directly to influence the pain, give gelseminine, gr. 1-250, every hour or two to effect—remedial or physiological—and, every three hours, zinc phosphide, gr. 1-6. In some cases, quinine hydroferrocyanide may advantageously be exhibited with the zinc phosphide. In anemic, run-down individuals, the nucleinated phosphates may be given three times daily between attacks.

Maintain dermal activity with epsom-salt or plain salt sponge-baths. The modified hyoscine-morphine-cactin formula has been extensively used, recently, and proved almost a specific.

Intercostal neuralgia and pleurodynia are symptoms bespeaking a disturbed body-chemistry, and here again we must familiarize ourselves with the basal disorders. In pleurodynia, bryonin and macrotin often prove of value. Colchicine may be given as an alternant. In practically every case, a causative acidemia must be controlled in the regular manner.

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QUERY 5861.—"Adenitis." J. W. D., Ohio, asks us to outline treatment for enlarged glands upon the neck.

Calx iodata, phytolaccoid, and irisoid, or the antiscorbutic formula are indicated in adenitis. Carbenzol, ointment of potassium iodide, or iodine in glycerin, should be applied locally. The nucleinated phosphates and triple arsenates may be alternated, week and week about, for tonic effect. The urine should be carefully examined. The intestinal tract must be kept therapeutically clean. In acute cases, unguentum Crédé (colloidal-silver ointment) may be rubbed in over the affected area morning and night.

Tuberculous and syphilitic adenitis must, of course, be recognized and treatment for the basal disorder instituted. In tuberculous patients, guaiacol is of benefit, locally as well as internally; nuguaiacal meets the indications perfectly. Always examine the tonsils, and maintain perfect cleanliness of the nares, pharynx, and buccal cavity.

A peculiar and wide-spread epidemic of adenitis existed earlier in the year. The writer personally treated at least a dozen cases in his immediate vicinity, and knows that several hundred people within a ten-mile radius have been affected; moreover, physicians from all parts of the country have written to this effect: "What is causing the enlargement of the cervical glands in so many children? It is not parotitis and many of the patients present none of the symptoms of tonsillar involvement. They merely feel sick, complain of pain in the neck, and present sometimes a subnormal, sometimes a comparatively high, temperature—100° to 102° F. In many instances, a coryza precedes the adenitis. Adults suffer more than children, as a rule."

It may be well to describe briefly two typical cases. A child fourteen months old, nephew of a competent practising physician, was supposed to have contracted a severe cold, with some coughing, intestinal disturbance, anorexia, and coryza. The child showed that it had pain in the neck and, on examination, the glands were found enlarged. The temperature ranged from 100° to 103° F.; pain evidently was severe and constant. The writer was called into consultation. He excluded bronchopneumonia, and diagnosed acute adenitis of the epidemic variety. Under his treatment, the child recovered, but the glandular swelling subsided very slowly.

The attending physician's wife visited the child once. A few days later she complained of sore throat. Examination with the head-mirror revealed somewhat enlarged and reddened tonsils and a rhinitis. The next day the cervical and submental areas were tender, the glands gradually enlarged, and the condition became more accentuated, until the entire area from jaw to clavicle was indurated and intensely painful. The pain radiated from the ear to the parotid gland, but the latter was not at any time involved. The temperature never exceeded 99.4° F. At this time, the doctor (husband) believed that the disorder extended to the mediastinum and, as the pain was continuous and almost intolerable, he asked the writer to examine the patient.

The nares, buccal cavity, and auditory canals were cleaned with a warm antiseptic solution; the ear was packed with cotton saturated with a solution of silver iodide; an ointment of methyl salicylate and camphor in lanum was applied over the affected area two or three times a day; and compresses wrung out of a carbolized solution of epsom salt were kept in contact with the indurated tissues. The intestinal tract was cleared out thoroughly and therapeutic cleanliness maintained. For internal use, calx iodata, boldine, and salicylic acid, alternated with iridoid, nuclein, and phytolaccoid, were prescribed. Prompt relief followed.

A strange fact is that practically all these cases have occurred in neighborhoods in which earlier in the season an epidemic of roup had occurred among poultry. In most instances the diphtheritic variety of roup was present and, in many cases, whole flocks were destroyed. Even where great care was taken and intelligent treatment instituted early, owners lost over 10 percent of their birds.

The writer is inclined to believe, therefore, that the organism responsible for roup in fowls is also the cause of the present epidemic of adenitis. In no instance has suppuration occurred, although, unfortunately, several children, treated by old-fashioned methods, died.

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QUERY 5862.—"Quinine-Content of Quinine Arsenate." M. D., Louisiana, is using the arsenate of quinine and desires to know the proportion of quinine in it.

Approximately the proportions of the components are: arsenic acid, 15 percent; quinine, 69 per cent. The 1-64-grain granule, therefore, would have: quinine, 1-95 grain, and arsenic, 1-450 grain.

As you know, this drug is of especial service in chronic malarias, fevers with quick relapses, and paludal cachexia. The arsenate acts promptly and is inoffensive. Competent observers claim that arsenic possesses a power in malarial conditions unknown and entirely foreign to quinine sulphate.

In ataxic and adynamic fevers, quinine and strychnine should be given together. In persistent intermittent fevers, quinine arsenate unquestionably is the remedy of choice. As much as 1-3 of a grain may be given each day; but under the latter circumstances the patient should be carefully watched for signs of arsenic sufficiency.

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QUERY 5863.—"Moccasin Bite."—E. W. S., Oklahoma, recently had to treat a 10-year-old boy bitten by a moccasin, and he asks what should have been done.

You do not tell, doctor, just how long after the boy was bitten you began treatment. The safest procedure, undoubtedly, is to throw a ligature about the limb above the lesion, incise freely, extract the venom by sucking or with a pump and cupping-glass, then to inject near the site a solution of potassium permanganate; meanwhile maintaining the heart with ammonia hypodermically and, if necessary, giving cactin. Strychnine should *not* be given.

The writer has not, for many years, practised in districts where venomous snakes are found, hence has little personal experience; however, while in Atlanta he treated three negroes, one bitten by an upland rattler and two by the cotton-mouth. In one of the latter cases, there was edema of the extremity and it was a difficult matter to save the patient's life. The other instances gave comparatively little trouble; but the line of treat-

ment above indicated was carried out in each instance.

One thing is to be emphasized—a physician practising in a snake-infected district should always carry tablets of potassium permanganate in his case. The solution which proves most satisfactory is one of 30 grains of the potassium permanganate in 4 ounces of distilled water. After ligating the limb, incise freely about the lesion, then inject the solution around and into the wound. Pilocarpine and gelseminine may be given to produce diaphoresis. Really, we do not thoroughly appreciate the value of gelseminine and pilocarpine hydrochloride in snake bites. Antivenom serums is also recommended by some clinicians, 10 to 20 Cc. of the serum being injected at frequent intervals.

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QUERY 5864.—"Morbus Coxarius." E. A. McM., California ("who couldn't keep house without the alkaloids"), requests us to describe the symptoms of tuberculosis of the hip-joint, and how to differentiate it from sciatica. A basal treatment is also desired.

The present patient is a delicate little girl of fourteen. She has an enlarged wrist, and has had some trouble with the hip, so that she walked with a limp. It was diagnosed some time ago as tuberculous, and a change of climate was recommended. "She was brought to this country (California), which is quite dry and rather hot, and improved a good deal. Just now she is having a good deal of pain in the hip, which sometimes goes to the knee. At first there was no tenderness on pressure, no difference in the development of the two sides, nothing but irregular paroxysms of pain. Now it is lame all the time, with paroxysms of pain, is somewhat stiff, and when pains are worse the foot cannot be lifted suddenly without causing severe pain. The patient has no appetite; her breath is offensive."

Morbus coxarius (tuberculous hip-joint disease) is not always easily diagnosticated in the primary stages. Usually it appears between the fifth and tenth years of age. There is tenderness, motion is impeded, and the position of the joint changes. Quite frequently a feeling of tenderness is experienced in the knee. When children complain of pain in the knee, invariably examine the hip—when the cause is not manifest.

If the affected limb is grasped with one hand and the small of the back supported with the other, a distinct resistance of the muscles can be felt.

Wrist-joint disease is not frequently seen. Manifestations, however, are practically the same as described.

Treatment, of course, consists in securing rest and immobility of the parts. If there is any pus, surgical measures are called for. We do not think there is any question about the diagnosis in this case.

In rheumatism there is fever, inflammation and swelling; the symptoms come on suddenly, and more than one joint usually suffers.

If possible, have the little girl examined by an experienced orthopedic surgeon.

You might advantageously push, in this case, nuclein and iodized calcium, or, nuclein, guaiacol carbonate and iodized calcium, together with the nucleinated phosphates as alternants. Inunct guaiacol and unguentum Crédé (colloidal silver) on alternate days. Good results have been secured by the use of the high-frequency current (vacuum electrode).

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QUERY 5865.—"Wart on the Eyelid." E. A. H., Iowa, is treating a girl of eighteen with a wart (now the size of a pea) on the lower eyelid. It has been there seven years and is still growing. It doesn't pain her, but is unsightly. Our correspondent asks, "How take it off without cutting?"

The wart probably will disappear if touched several times daily with this dermal solvent: salicylic acid, 10 parts; lactic acid, 50 parts; flexible collodion, 40 parts. But one must be exceedingly careful not to allow the fluid to enter the eye. At the same time prescribe magnesium sulphate, 5 grains three times daily.

Caustics are employed for removing blood-filled growths, not verruca or callosities. The formula given removes most corns or warts within four or five days. Occasionally, though, it fails entirely.

As you know, warts are peculiar things, sometimes disappearing under practically any treatment; then, again, resisting the most powerful agents. If the wart is pedunculated, by all means use the solvent. Should it not prove efficacious, one other procedure remains to be considered, namely, the destruction of the growth by electrolysis. If you have a wall-plate, you can destroy the wart at one sitting by passing a steel needle through the base, attaching it to the positive pole; the negative electrode may be placed anywhere on the body, preferably to a pad saturated with a dilute salt solution.